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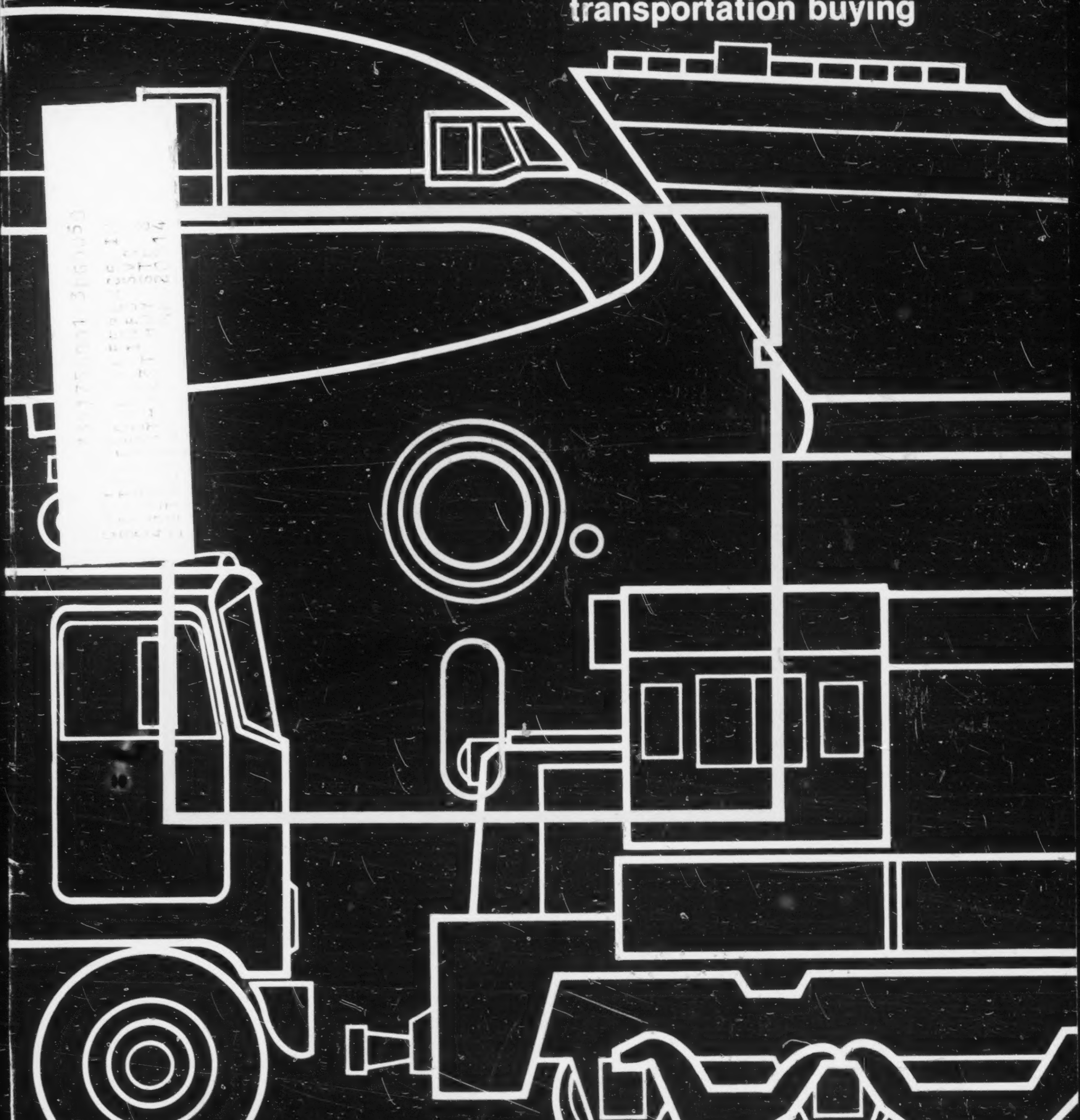
Program success into your transportation buying



PurchasingWorld®

Helping you manage the business of buying

Vol. 29 No. 11-November 1985

Special report: Transportation

51 Tabs to stay in bounds
New nationwide survey of PMs turns up new strategies to contain costs including use of third party containers for piggyback, discontinuing private fleets, and more intensive use of fewer carriers.

54 New rules, roles, players in game
The titles may be old in some cases, but the roles for a whole list of third party transportation specialists are changing.

58 Getting there with EDI
The end of the paper chase isn't quite in sight yet, but the transportation industry—where electronic data interchange began in the first place—is making a serious run at doing just that.

66 Software helps make right moves
There's software for just about any transportation related function these days. Here's a list of a few.

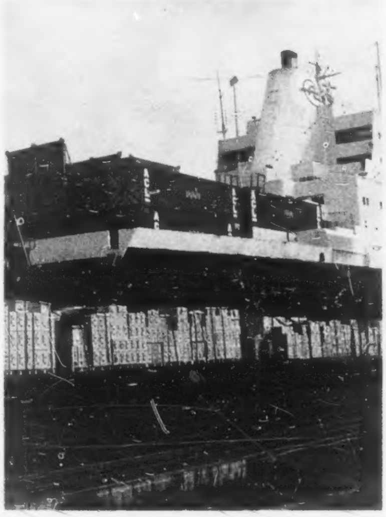
Features

64 When the president is PM
To Dominic Vespia, who started up his own company to market electronic typewriters, purchasing is at the core of Swintec Corp.'s success. He's the president; he does the buying and he does a lot of it in Japan.

68 Making the right software decision
Don't reinvent the wheel, or buy custom wheels if you don't need them. Here are some guidelines from Jeff Pinkerton.

74 How PMs spend their time
In case you wonder what you've been doing all day, here are the results of research by Ernst & Whinney into how purchasing people spend their time. The answer is: you've been very busy.

80 The quick print alternative
Why are all those nebbishes rolling around on the floor saying "You want it when?" Put QP in your vocabulary, and you'll have the last lapse—in meeting your printing needs.



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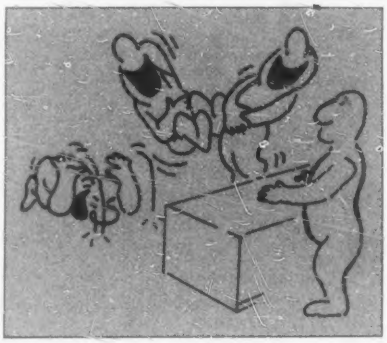

80

Departments

4 PW Pointers
6 Editorial
11 PW Predicts
18 Business Datatrak
42 Transportation
46 Negotiations
48 Law
90 Classified
98 Ad Index

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PW PREDICTS

Robert S. Reichard, executive editor

Dollar's dip means small change

Discount talk of a weakening dollar setting off any new price spiral.

For one thing, it isn't certain that announced plans to bring the dollar down to more realistic levels will actually work. Even if they do, the inflationary effect is expected to be modest. Some reassuring factors:

- It is in nobody's interest to see the dollar fall precipitously. The avowed goal is for only about 10% additional decline over the next year or so—for good reasons. Foreign exporters fear that any sharper decline would cut into their big U.S. markets. And Washington fears that big plunge would dry up the huge inflow of foreign capital that has been helping to finance the huge budget deficit.

- A drop of just 10% would still leave a lot of fat on the dollar. Consider the fact that the dollar's purchasing power is still close to 40% above 1980 levels when our currency first began to shoot up.
- Markets tend to adjust to currency changes slowly. Historically, any shift in the dollar has taken around a year before it had any meaningful impact on the overall price level. Look at the record. The dollar is already off more than 10% from early 1985 peaks and inflation rates have scarcely budged.
- The dollar has been so strong for so long that foreign firms have been able to sell here at inflated prices *vis-a-vis* production costs. Autos are a perfect example. Many overseas firms have been able to build up hefty profit cushions. This would probably allow them to absorb any exchange rate differentials, enabling them to hold their U.S. prices stable and retain their market share.
- There are too many buyers' markets—typified by supply/demand imbalances—that should discourage foreign vendors from boosting prices in line with a weakened dollar. It is difficult to see such glutted commodity sectors as steel, nonferrous metals, chemicals, plastics, and textiles rising much above current levels even with a depreciated dollar.

Most economists and econometric models tend to support this non-inflationary appraisal. One business analyst, for example, has a simple rule of thumb: He counts on only 1% increase in the general price level for each 10% dollar devaluation.

But even this may be an exaggeration. Wharton Econometrics, for example, finds only moderate inflationary effect after plugging sharp dollar declines into its econometric model (6% in the third quarter 1985, 12% in the fourth quarter, and an additional 20% devaluation in 1986).

Another encouraging note: Other (non-dollar-dependent) inflation factors will also be weak over the coming quarters—(1) oil tags could fall further, (2) food quotes look to remain relatively unchanged, and (3) wage gains have stabilized.

In short, there is little to suggest any major uptick in the overall price level even if the dollar declines. ***PW***'s latest GNP price deflator estimates peg the average advance for 1986 at 3.5%, just about in line with this year's estimated 3.4%.

1986 fleet car choices

Mid-size cars are "in" for 1986 fleet car purchases.

During the upcoming year about two out of every three cars entering commercial fleets will be in the mid-size category. That compares to only 35% two years ago and 54% for the just-completed 1985 model year.

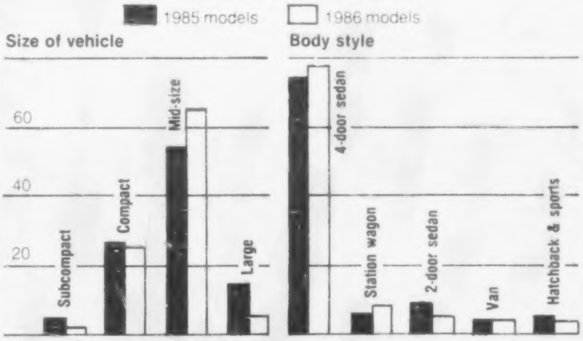
The gains, according to the National Association of Fleet Administrators survey of 200 fleets, are coming at the expense of both compacts and large cars. Subcompacts are practically nonexistent in these fleets.

Other key findings of the just-released study:

- AM/FM stereo, cruise control, and tilt steering wheel are growing rapidly as popular options. If the trend continues, they may become as common as automatic transmissions and air conditioning.
- Four-door sedans continue to dominate body styles selected.
- While only a handful of fleets are making changes in specifications, there may be a trend developing in the selection of 4-cylinder engines for mid-size cars.
- As a rule of thumb, however, most buyers order compacts with 4 cylinders, most mid-size cars with six cylinders, and most large cars with eight cylinders.
- Initial cost is the most important factor in fleet car selection, followed (in descending order) by depreciation, resale value, economy of operation, serviceability, prestige, and fringe benefits.

1986 fleet car choices

(% of purchases)



Source: National Association of Fleet Administrators

PW PREDICTS

Aluminum

CURRENT SITUATION: **Buyers continue to hold most of the trump cards** partly because of lackluster demand holding at last year's levels. Foreign producers, plagued with overcapacity and drawn by the strong dollar, continue to funnel cheap imports into the domestic market. Result: ingot last month was fetching only 47¢/lb—a sharp drop from the 54¢/lb level of last December.

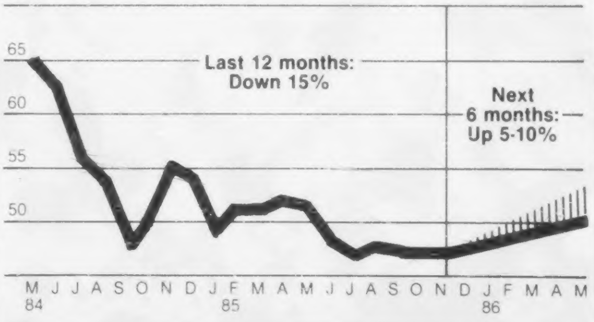
DEMAND: Don't count on any big new spurt. Next year is looking more like a repeat of 1985 (with about 7.7 million short tons likely to be shipped by domestic producers). Blame it on flat markets for packaging, construction, and autos. Only commercial aircraft should show a good increase. **The 1986 outlook for the Free World as a whole isn't that much more bullish—primary aluminum consumption is expected to be up only 2%.**

SUPPLY: Markets remain glutted—despite the fact that U.S. producers have cut output to only 70% of potential. Reason: The Free World as a whole is producing at 85% rate (95% in Canada), and Australia is turning out 20% more metal than it did in 1984. There's capacity abuilding especially in Australia and China. And **inventories are top heavy—North American stocks are off only 5% from 1984's highs.**

PRICE OUTLOOK: Some price boosts seem inevitable by early 1986. (Some U.S. firms need 60¢/lb to break even). Low consumer stocks and fear of a possible U.S. strike next year could help buoy prices. **But hikes are likely to be quite modest with little chance of basic ingot rising much above the 50¢/lb level over the next 3-6 months.** Advances in fabricated products are likely to be very restrained because of 1) overcapacity in rolling mills, 2) continuing import competition, and 3) the normal lag in price changes.

Aluminum ingot (market price)

(cents/lb.)



Steel

It's still too early to tell whether the recently announced January boost on sheet steel will hold. Two factors suggest that the hike could be in trouble: 1) low mill operating rates (under 70%), and 2) still strong import penetration. Finished steel is coming in far above the 18.5% market penetration target first announced late last year. Reason: Imports are pouring in from non-quota "Third World" countries. Relatively low demand is also a factor in holding price rises in line. Shipments for 1985 are not likely to top last year's 73 million tons. Next year doesn't look much better.

Styrene

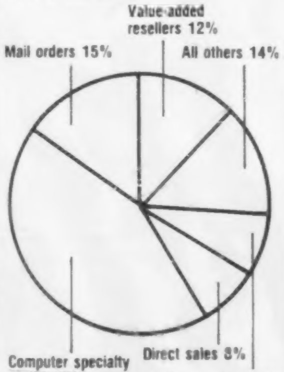
A new 1.5-2¢/lb price increase (over and above recent 25¢/lb levels) may not make it despite temporary plant shutdowns. Reason: 1) Prices have actually been moving the other way with 1-1.5¢/lb shaved off tags during the summer months, 2) Benzene (the primary feedstock for making styrene) is starting to sag, and 3) There's still more than enough of the chemical to go around. Even a producer concedes, "It's still a buyers' market."

Computer software

Prices are still heading down. Sign of the times: Quotes on programs that compete with Lotus' popular 1-2-3 package are priced as much as 75-80% lower. And on a more general level, large buyers are turning to specialized mail order operations and other firms that supply software in large volume at discount prices. Some large users are also getting direct distribution (via centralized purchasing) from producers at cut-rate prices. Another money-saving approach is site licensing which gives big customers the right, for a fee, to copy and distribute copies within their own organizations.

Computer software sources

(% of dollar sales)



Source: Future Computing

Copper

Count on bargain-basement prices continuing—with producers unlikely to get more than 65¢/lb. for their metal through year-end. Reason: Free World production is again equaling or exceeding demand, thus preventing any cutback in still high inventory levels. On the consumption front, for example, global chew-up will amount to no more than last year's 7.6 million

PW PREDICTS

Refined petroleum products

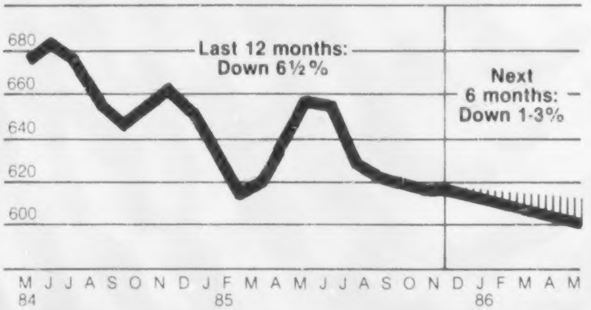
CURRENT SITUATION: "Nervous" is the only word to characterize today's market. Fears of gluts and new production increases by Saudi Arabia and Iraq are being offset by Iranian supply interruptions from the Gulf war. However, prices have been drifting lower—overall refined petroleum tags in the U.S. have fallen about 6% since spring. Slow demand could also be a factor in the decline. **Year-to-date U.S. oil consumption has dropped 2% under a year ago.**

DEMAND: Even with some late pickup, overall 1985 consumption won't meet last year's level. Best bet: a 0.5-1% decline due mostly to a sharp 15% drop in resid oil use. But if you assume a 2.5% real GNP growth rate for next year, **petroleum could come back by about 1% (to 15.8 million bbl/day.** There will be disappointments—particularly in gasoline where increases in travel demand are more than offset by increases in mpg efficiency. **But resid oil should stabilize after 1985's big drop. Distillate fuel oils could be up as much as 5%.**

SUPPLY: Barring any surprises, there should be more than enough oil to go around. Saudi Arabia's decision to boost production by 1 million bbl/day should allow OPEC to maintain its current 40% share of the Free-World market. The U.S. supply of home heating oil should be more than adequate for the upcoming winter. **And for 1986, overall U.S. oil production should remain steady at 11.2 million bbl/day.**

PRICE OUTLOOK: With these supply/demand projections and aggressive Saudi Arabian marketing, more near term softness cannot be ruled out. **DOE projects that 1986's average import crude price wil drop to near $26/bbl.** This could mean more easiness in most refined petroleum products. Second quarter 1986 quotes should run something like this: Gasoline (−6%), wholesale #2 oil (−4%), and #6 oil (−13%).

Refined petroleum products
(Index: 1967 = 100)



metric tons—as U.S. and European demand lags and Chinese buying slows down. All in all, it means continuing trouble for U.S. producers who need almost 80¢/lb to break even—far more than the Free World's 58¢/lb average.

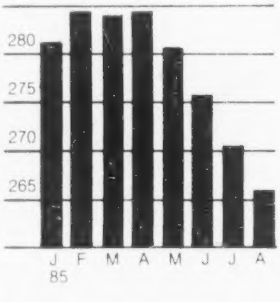
Lead

Tags continue to back and fill in the low 18.5-19¢/lb range—despite the fact that this is the height of the battery maker lead-buying season. These key users, hurt by last year's mild winter, apparently have excess lead on hand and are leery of any major purchases until their business perks up. Also holding battery makers back: U.S. primary producer lead stocks are now running at a more than 2-month supply and secondary producers are waiting in the wings to fill any sudden demand spurt. The result: continued price weakness into early 1986.

Paper and products

Recent $60/ton boosts in uncoated white papers have washed out—with tags again reported to be down as much as $125/ton under list. And while coated papers are generally holding firm, isolated reports of discounts are noted by some volume buyers. Meantime, corrugated cartons are beginning to bottom out, though levels come 6-7% under early 1985 readings. Elsewhere, the industry is trying to boost unbleached kraft paper by $30/ton. But chances of it sticking, given current poor demand conditions, seem quite slim.

Corrugated prices
(Index: 1967 = 100)



Computer hardware

Price declines are still the order of the day. IBM, for example, is offering rebates on some hard disc PCs (as much as $350 or 6% on the PC AT and as much as $300 or 8% on the PC XT). And Big Blue could be ready to post more reductions by year-end as inventories continue to mount. Apple has reduced tags on all of its lines anywhere from 10-25%. But despite all the price erosion, microcomputer dollar sales will still be up for 1985 as a whole—with industry billings expected to reach $8.5 billion, up 10% from 1984 levels.

Titanium dioxide

Count on a new 3-4¢/lb increase sticking. New list quotes are 78¢/lb for the rutile grade (up 3¢) and 74¢/lb for than anatase grade (up 4¢). It follows a similar upward move by

Semiconductor demand

Look for the semiconductor market to turn around. Increasing demand for integrated circuits and discrete devices should rack up sizable global gains by next year.

Worldwide dollar sales of ICs, for example, are projected to rise 21% in 1986, offsetting this year's estimated decline (see chart). The same thing seems to be happening in the less volatile discrete sector where this year's 8% drop-off is expected to give way to a 7% advance in 1986.

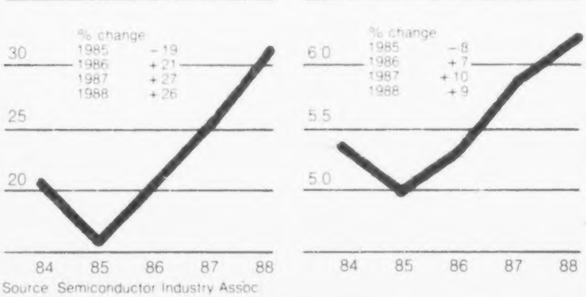
Moreover, this new upward trend—based on a forecast prepared by the Semiconductor Industry Association—is expected to continue into 1987 and 1988. This should firm prices after the sharp declines of the past year which saw an average fall of about 20% from 1984 highs.

Some of the more detailed estimates revealed by the just-released study:

- Overall IC sales are expected to increase 21-27% each year through 1988, topping $32 billion by that time.
- Among IC product groups, only digital CMOS ended up on the plus column this year (up 7% to $3.3 billion). More important, annual growth of between 30-49% is expected to bring these sales to $9.4 billion by 1988.
- Total dollar sales of digital N+PMOS memories and logics dropped this year primarily because of sharp price declines.
- But both will recover next year, with memories expected to spurt 32% and logics about 19%.
- Analog sales dropped close to 4% this year but will post gains of 11-16% through 1988. Digital bipolar devices, down 22% this year, should grow at 17-20% annual rates over the next few years.
- Discrete devices, down 8% this year, will grow by nearly 7% in 1986 and by close to 10% during the following two years, reaching a total of $6.3 billion by 1988.

Semiconductor markets: a 3-year look ahead

(Total—U.S., Europe, Japan, billions of dollars)



Source: Semiconductor Industry Assoc.

overseas producers. Behind the firming: recent reductions in capacity that have made supplies rather snug—not only here but overseas. Result: producers everywhere are operating at capacity and holding just minimal inventories. The overseas tightness has also cut down on import competition—with incoming shipments off 5-10% over the last six months.

Zinc

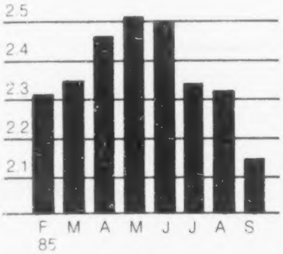
World demand (now lagging year-ago levels) and high inventories (again rising) are combining to put downward pressure on prices. Indeed, not even the closure of Asarco's big Corpus Christi smelter has made a difference. Signs of the time: U.S. dealer quotes barely above the mid-1930s level, LME prices in the low 30s, and new cuts in European producer tags. Nor is any near-term change seen as orders continue on a hand-to-mouth basis and world producers drag their feet in making needed production cutbacks. As such, look for softness to persist, though a modest rally in early 1986 is possible if U.S. and European demand pick up as expected.

Nickel

The plating and alloying metal has given up all of its earlier 1985 price gains. Dealer cathode, for example, has dropped close to 15% under its late spring high. And LME tags recently slipped under $2/lb. The basic problem: a worldwide glut as additional material (some of it cut-rate) comes from such new sources as Australia and the Western Pacific. Another possible factor in the current weakness: Some producers are said to be offering substantial price concessions in an effort to increase their overall share of what is now basically a flat market.

Nickel prices

(Dealer cathode—$/lb.)



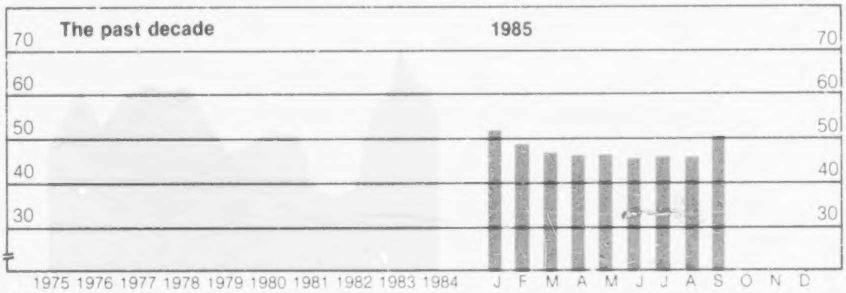
Molybdenum

The oxide remains on shaky ground as dealer quotes drop into the $3/lb range, off some 25¢/lb from late August levels. The official producer list has also been reduced (by $1/lb) and ferromoly is on the decline. Producers are becoming more aggressive, too, offering competitively priced spot material, just-in-time deliveries, and formula pricing to make deals more attractive. Behind the easiness: high inventories which, at 45 million lb, now represent more than a year's supply for U.S. users.

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept

KEY ECONOMIC TRENDS

Renewed vigor buoys business

Things are looking a bit brighter on the business front these days. Take NAPM's widely monitored business barometer, for example. For the first time since January, this indicator of near-future business activity has jumped over the neutral 50 mark to nearly 51.

As NAPM survey committee chairman Robert J. Bretz puts it: "The economy is showing definite signs of improvement. Surely, one month doesn't make a turnaround, but the numbers are impressive."

Also encouraging is the fact that the overall stock/sales ratio remains fairly low compared to levels of the past decade (see story following). This suggests that orders will have to be met by new production rather than by inventory drawdown.

Moreover, the backlog of unfilled orders has been in a rising trend for four straight months—another strong indicator of probable gains in factory output over the next few months.

On the other hand, no one expects a major economic upsurge. Business leaders can best be described as "cautiously optimistic."

One of the indicators that has been doing exceptionally well lately—auto sales—could be in for a modest near-term dip. It would be unrealistic to assume a continuation of the 12 million-plus annual rate of the past few months (see chart), particularly with the removal of the 7.7% financing incentives.

But the industry is still talking about 11 million unit sales for 1986—about the same as 1985. Also, truck sales should meet the 1985 all-time peak of 4.6 million units.

Factory overtime numbers also support the somewhat improved outlook. At latest report, this key indicator of factory demand pressure was estimated at 3.3 hours—up significantly from the 3.1 low of a few months ago.

Even capital spending looks pretty good. The climb has flattened out, but at record high levels. And unspent backlogs of previously authorized funds seem to guarantee there will be no near-term decline.

There is also the booming construction industry where contract awards have remained on a high plateau since early spring. More important, the strength is broadly based, covering residential, nonresidential, and public construction.

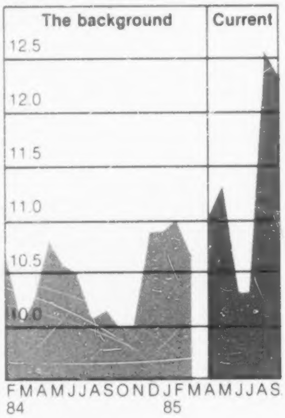
And there's the still relatively easy credit policy being pursued by the nation's money managers. Given the U.S. commitment to weakening the dollar, there's little the Fed can do to reverse this trend.

Perhaps most reassuring of all are the results of the National Association

Leading indicators

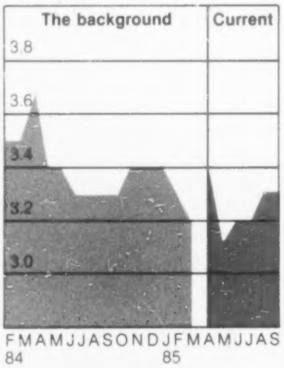
1. Auto sales

(Millions, seas. adj. annual rate)



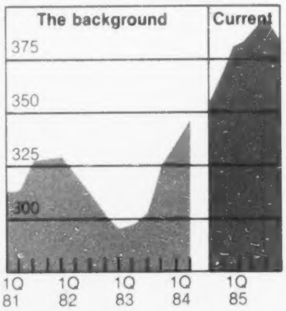
2. Factory overtime

(Hours: seas. adj.)



3. Capital spending

(Bil. $; seas. adj. annual rate)



of Business Economists survey. The top 350 corporate analysts queried by the survey predict a respectable 2.7% real growth rate now through late 1986.

While some of these economists still feel that a recession by late next year can't be ruled out entirely, their numbers are way down from a year ago when the same question was asked. At that time, an overwhelming 87% of the respondents were worried about a possible downturn either in late 1985 or in 1986.

Lean is the mien

PMs and other top execs charged with monitoring inventories are amazing even the experts.

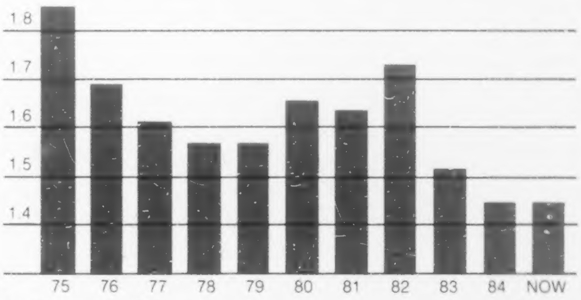
For the first time in history, factory stocks have failed to rise during the mature stages of a business recovery.

This all seems to be part of a long-term trend. As noted in the chart, current levels (measured as a percent of sales) have dropped an eye-opening 20% under decade-ago levels.

It is not all that difficult to find the reasons. *PW* talks with purchasing managers and several leading economists suggest that several factors may be at work, including:

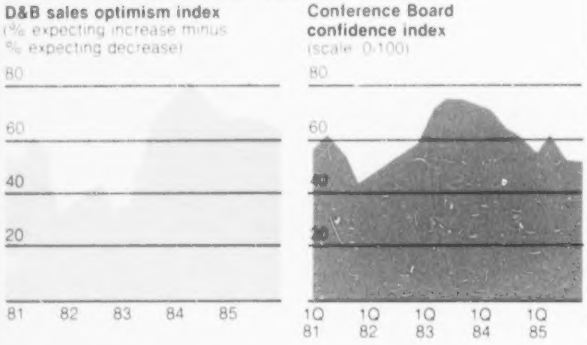
- **Changing market climate:** Specifically today's ready-availability and lack of inflation. This has not only been an open invitation to hand-to-mouth buying, but has also sharply reduced the need for hedge purchases.
- **High inventory carrying costs:** Given today's still-high interest rates, it takes anywhere from 1.5-2% a month to maintain stocks. That's 18-24% annually—high enough to give most firms a strong incentive to keep stocks trim.
- **Improved inventory management:** Part of this stems from improved computer controls. But an added push comes from the increasing interest in just-in-time delivery techniques.
- **Improved end-use forecasting:** Computerized approaches have helped here, too. But equally important are the more sophisticated personnel charged with managing the inventory function.
- **Strong import pressures:** Domestic manufacturers—from the basic raw material all the way to finished products—have had to improve pipeline flow becuse this is one of the few ways they can undercut the cost advantage of buying cheaper foreign products.

Factory stocks stay slim
(Stock/sales ratio)



Source: Commerce Dept

Business confidence: two views



Mood still positive in the exec suite

Nobody is expecting miracles, but top business executives are still bullish. Results of two recent surveys tell the story:

- Dun & Bradstreet's Sales Optimism Index, based on replies from 1,400 business executives, has fallen off a bit from last year's high. But it still remains far above the lows of 1982-83 with those respondents expecting increases still outnumbering those seeing decreases by almost 9:1.
- The Conference Board's Confidence Index, based on a 1,500 firm sample, follows a similar pattern. The latest 51 reading is below recent levels, but is still well ahead of the recession lows of a few years back.

The mood in the corporate suite is perhaps best summed up by Joseph Duncan, corporate economist and chief statistician for D & B: "Business leaders have taken a more cautious attitude regarding inventory surpluses, increased sales, and profits. On the other hand, prices have stabilized, indicating that inflation is under control."

Here are some of the specifics of the D & B survey (fourth quarter 1985 vs. fourth quarter 1984).

- **Prices:** Some 32% of companies see prices running ahead of last year. This represents a fair-sized drop from three months ago when 38% were counting on higher quotes.
- **Profits:** A slight decline is seen here—63% are now counting on fourth quarter gains vs. 68% three months ago.
- **New orders:** Pretty much the status quo here with the same 69% anticipating gains as noted three months ago. That's still good news when compared to only 8% who see declines.
- **Inventories:** Tight fistedness continues with 35% anticipating gains.

BUSINESS DATATRAK

CURRENT PRICES

Industrial prices: signs of declines

Price softness is spilling over into the fourth quarter and industrial producer quotes are actually edging down 0.3% over the latest 30-day period.

Biggest declines were in the transportation sector this time around, as tags on cars and trucks dropped significantly (reflecting year-end clearances of leftover 1985 models).

But weaknesses were also noted in other highly fabricated areas too. Thus both agricultural and woodworking machinery also edged lower and the overall capital equipment price index dropped by a substantial 0.6%

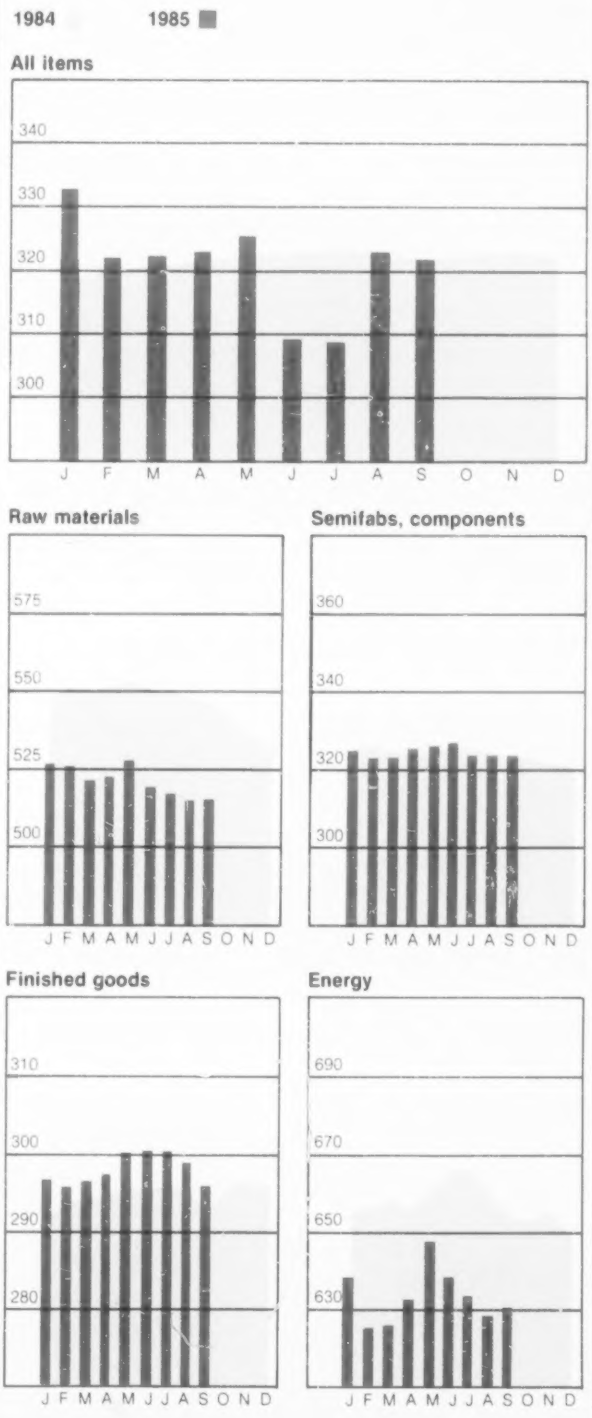
Key components and raw materials were none too strong either. Declines have been noted in motor

This month's breakdown

	Latest level (Sept.)	% change from: Month ago	Year ago
Bearings	353.5	−0.2	2.7
Bolts, nuts, etc	278.2	0.2	0.5
Chemicals, inorganic	300.7	0.0	−2.0
Chemicals, organic	356.8	−0.5	−0.2
Concrete products	323.3	0.2	3.7
Corrugated cartons	266.5	0.0	−2.2
Cutting tools, small	286.5	0.0	1.9
Electric lamps (bulbs)	346.9	0.7	4.5
Electronic components	197.4	−0.1	1.0
Fans and blowers	359.7	0.0	2.3
Foundry and forge products	364.1	−0.1	0.2
Fuel oil (residual)	932.4	0.2	−16.0
Furniture, commercial	311.6	0.7	4.7
Gasoline	562.4	−2.2	2.3
Glass, flat	225.5	−0.4	2.6
Glass containers	386.9	1.4	6.1
Gypsum products	329.6	−2.5	−7.3
Hand tools	375.2	0.0	3.6
Hand tools, power driven	234.0	0.2	3.9
Industrial furnaces	385.5	0.0	2.3
Integrating and measuring instruments	232.3	−0.1	1.0
Internal combustion engines	348.5	0.3	2.7
Lubricating oil	N/A	N/A	N/A
Lumber millwork	313.3	−0.2	1.9
Material handling equipment	295.1	−0.2	1.6
Metal containers	357.7	−0.1	1.5
Metal mill shapes (nonferrous)	307.5	−0.3	−3.7
Metal tanks	305.0	−0.4	−0.2
Motors and generators	351.6	0.1	3.4
Motor trucks	272.9	−7.1	1.7
Office and store equipment	154.9	0.0	0.8
Paperboard	266.6	0.1	−7.6
Paper boxes and shipping containers	267.9	−0.4	0.4
Paper office supplies	239.6	0.2	−2.8
Paint	278.8	−0.1	−0.1
Plastic resins	305.4	0.1	−2.1
Precision measuring tools	263.2	0.0	3.9
Pumps and compressors	357.4	0.1	2.2
Refractories	372.2	0.0	2.9
Rubber belts and belting	343.5	1.7	−1.1
Scales and balances	229.0	−0.1	−1.4
Steel products	363.3	0.0	−0.5
Switchgear	278.0	0.0	0.1
Textiles, synthetic fibers	154.6	−0.3	−2.9
Textiles, gray fabrics	150.5	0.2	−2.7
Tires and tubes	236.6	0.0	−3.1
Transformers and power regulators	231.8	−0.2	1.4
Welding equipment	291.9	0.1	0.8
Wire and cable	205.6	0.0	1:9

Industrial prices

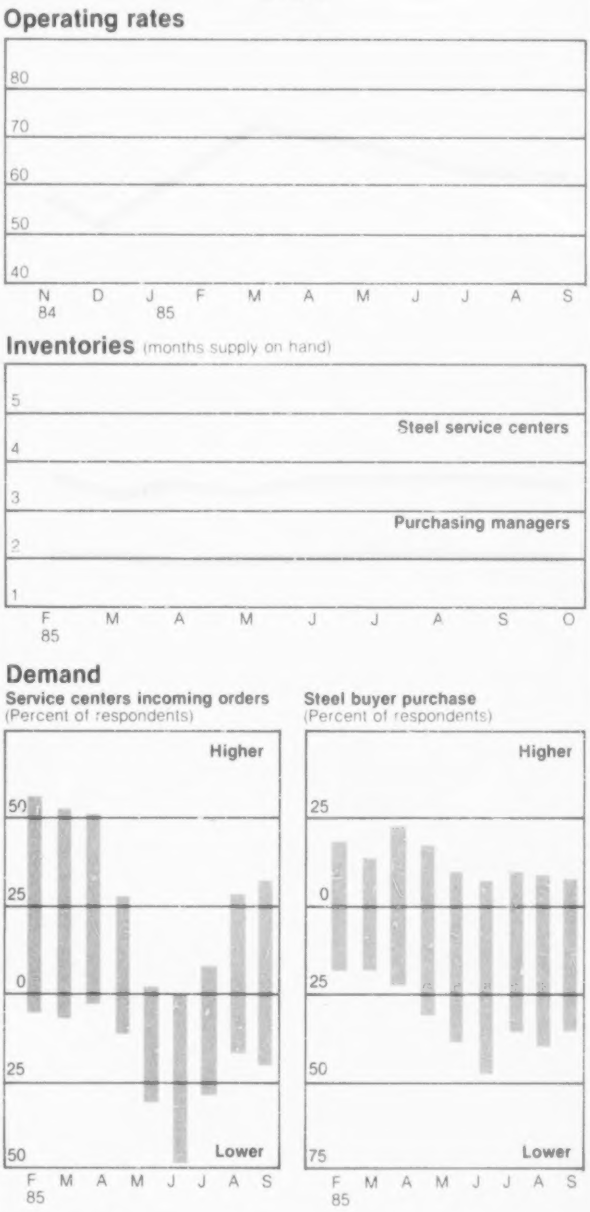
(Index: 1967 = 100)



Source: Bureau of Labor Statistics

BUSINESS DATATRAK

Steel



Import prices (compared to domestic)

Steel buyers

Above	0%
Same	14%
Slightly below	79%
Substantially below	7%

Service centers (carbon)

Above	0%
Same	4%
5-10% below	92%
10-20% below	4%
Over 20% below	0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

vehicle parts, electronic components, several nonferrous metals, flat glass, paper, paint, synthetic fibers, processed yarns and threads, and organic chemicals.

Construction materials, while showing no overall change, also sported a few notable declines. Softwood lumber, plywood, gypsum products, sand and gravel, and timber are all off from month-earlier levels.

The same mixed picture appears in the energy sector. Continued declines in gasoline, for example, were enough to offset modest advances in jet fuel, diesel fuel, home heating oil, and coal.

Perhaps the most encouraging sign of all (at least from the PM point of view) was the continuing decline in so many items. Thus roughly 40% of the 50+ product lines monitored in *PW*'s regular monthly rundown (see table) edged lower *vis a vis* month-earlier levels.

Also worth noting: The aggregate price index for crude oil is now running close to 6% under last fall—a pretty good indication that material cost pressures are still pretty much under control.

STEEL SCENE

Steel showing some mettle

The stage may be set for a modest recovery in steel demand. Not only are inventories down a bit from recent levels, but both buyers and service centers are talking about somewhat greater usage in the months immediately ahead.

On the inventory front, for example, buyers responding to the latest NAPM steel user survey put their average stocks at just over two months—off about 4% from summer highs.

A similar trend is noted by distributors responding to the latest Steel Service Center Institute (SSCI) survey. Current holdings are put at 3.5 months—down about 5% from as recently as August.

Demand expectations over the next few months are also looking up—particularly in the service center sector where about one in every three respondents expect an uptrend in orders over the next three months—nearly double the 18% who feel some new declines are possible.

Bolstered by this information, SSCI president Andrew Sharkey is predicting anywhere from a 21.0-21.5 million ton shipment year for his group—up slightly from the 20.9 million tons that cleared the market last year.

Sharkey also notes that despite record shipping levels, market strength continues to be narrowly concentrated in automotive, appliance, construction, and defense. Other important markets, such as farm equipment, general machinery, and mining continue to show few signs of life.

Turning to prices, Sharkey confirms recent softness. Despite the fractional overall tonnage gain, he feels 1985 dollar sales could be off anywhere from 5-10%.

In large part this can be traced to the still-large influx of cheap steel imports which this year is estimated at near 23 million tons.

Some 96% of the service centers, for example, say carbon steel is coming in 6% or more under comparable U.S. levels. The figures are even more impressive in stainless where the metal is coming in at 6% or more under U.S. prices. Nearly 20% of survey respondents put the price break in the 11-20% range.

Buyer reports suggest similar price bargains—with 7% dubbing the price advantage as "substantial."

But it's doubtful whether these cheaper imports will be available in today's tonnages for very much longer.

Point worth noting: Some 30% of the queried service centers expect to be less dependent on overseas metal over the next six months with not one respondent expecting to increase his foreign share.

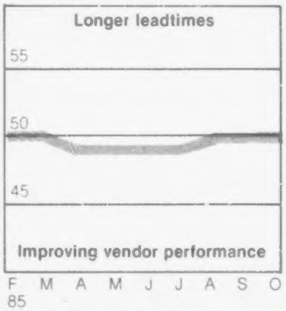
This, in turn, could eventually mean higher service steel tags. Several distributors, for example, are already saying that import restraints should give sellers some additional bargaining leverage by early next year.

But import restraints or not, there should be more than enough steel to go around. Right now, for example, both service centers and steel users are in complete agreement that not one single item will be in short supply over the next few months.

Monthly procurement status report

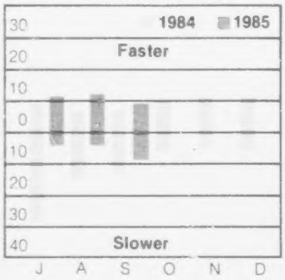
Leadtime index

A "diffusion" index based on 158 key commodities. Avove "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance

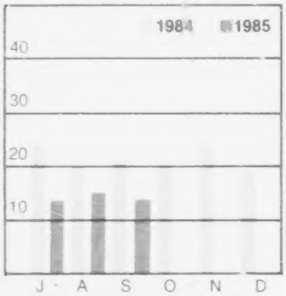


Delivery performance

(Percent reporting deliveries)

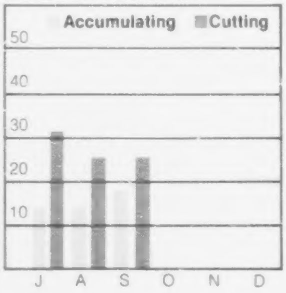


Forward commitments



Inventory strategy

(Percent of respondents)



Source NAPM

PROCUREMENT STATUS

Still on the 50 yardline

Fall activity is supposed to be up. But you would never know it by looking at key procurement yardsticks.

PW's exclusive lead time index is squarely on the neutral 50 mark—meaning any stretchouts that have been occurring are being effectively offset by shrinkages in other sectors. And NAPM's speed-of-delivery report still shows an equal number reporting slower deliveries as those reporting faster deliveries (each 9%), with the remaining 82% reporting very little overall change.

Moreover, purchasing managers still seem to be playing their procurement cards close to the vest. One out of four, for example, is ordering production materials on a hand-to-mouth basis. That's a big jump from the 16% reading noted in the previous month.

The story is much the same as far as inventories are concerned. Specifically, the 26% of the respondents who are cutting remains unchanged from last month. Equally significant, parers have now outnumbered accumulators for 12 months.

Reasons for all this: (1) For the eighth straight month the NAPM Business Survey Report has failed to point up a single item in short supply and (2) price decreases continue to top increases for 10 straight months—with 19% reporting decreases and only 7% reporting increases.

In sum, it's still an all-out buyer's market with little on the horizon to suggest any change, certainly not for the next 3-6 months.

Leadtimes and availability

Chicago: Coming in (in weeks) are chrome chemicals (½-1), aluminum sheet (8-10), aluminum plate (10), special copper tube (5), resistors (6-12). Coils could drop to 6 by late fall. Out a bit are special brass and copper sheet (5) and common process stearates (1-1½).

Cleveland: Higher weekly waits for polyethylene (3-4), fiberboard and chipboard (3-4), plastic packaging material (3-4), and plywood and softwood lumber (1-3). In are hardwoods (1-2), multiwall paper (4-5), steel drums and canisters (1), and maintenance paint (1-2).

Los Angeles: A carbon copy of last month with these leads: galvanized steel (12-14), grey iron castings (6-8), brass castings (4-6), domestic fasteners (4-6), standard bearings (20-24), standard valves (10-12), lube oils (2), and choice white greases (2).

Houston: The only big change here is in heat exchangers—in one month to 6-8 weeks. Other weekly waits: pumps (16-28), corrugated cartons (2), HDPE (2-3), and stainless fasteners (8-10).

Philadelphia: Electronic components continue to ease with these weekly leads: CMOS ICs, large scale ICs, and LTL ICs are all off the shelf to 12; memory ICs (to 10), connectors (8-12), relays (6-8), and resistors (4-6).

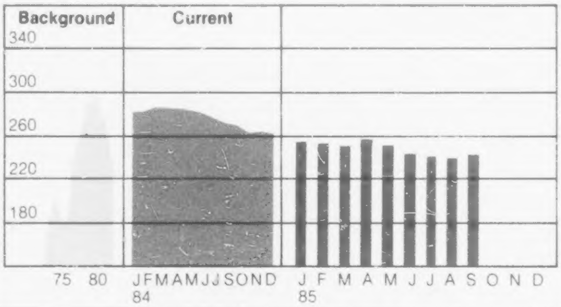
Pittsburgh: Everything continues easy. Sample weekly waits: multiwall bags (4-6), corrugated and folding boxes (4-6), wirebound boxes (5), drums (1), seals (1-2), paint (4-5), polyethylene and PVC (6), and alloying materials (2).

BUSINESS DATATRAK

Raw material price barometer

Latest month	240.1
Month before	240.0
Year ago	274.0

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	24.40
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt.	29.25	29.25	29.25
Steel, plates, Pitts., cwt.	23.25	23.25	23.25
Steel, plates, H.R., Pitts., cwt.	23.25	23.25	23.25
Steel, sheets, C.R., Detroit, cwt.	27.85	27.10	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.465	0.475	0.485
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.20
Brass, red, 85%, [sheet], lb.	1.29	1.29	1.24
Brass, yellow, [sheet], lb.	1.24	1.24	1.19
Cadmium, ton lots, lb.	1.00	1.00	1.55
Copper, electrolytic, wire bars, refd., lb.	0.66	0.66	0.62
Copper sheet, over 24 in., lb.	1.38	1.38	1.33
Lead, common, N.Y., lb.	0.190	0.190	0.220
Magnesium, pig ingot, [99.8%], lb.	1.48	1.48	1.48
Mercury, 20 fl. lots, N.Y., fl.	318.00	317.00	322.00
Molybdenum, oxide, dealer lb.	2.90	3.15	3.61
Nickel, cathode, dealer lb.	2.10	2.30	2.21
Platinum, dealer, oz.	315.00	318.00	326.00
Silver, N.Y., oz.	6.30	6.04	7.14
Tin, Straights, N.Y., lb.	6.07	5.95	6.05
Zinc, Prime West, East St. Louis, lb.	0.38	0.41	0.45
Zinc, die casting alloy, No. 3, lb.	0.445	0.485	0.515
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.18	16.22	15.65
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	495.00	495.00	495.00
Wrapping paper, std. distributor cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.257	0.258	0.380
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.045	1.040	1.040
Cotton middling, 1", N.Y., lb.	0.563	0.566	0.595
Printcloth, 48", 80x80, N.Y., spot, yd.	0.68	0.62	0.79
Army duck, 37", 13 oz., yd.	1.30	1.70	1.78
Blended printcloth, 64", 78x54, yd.	0.830	0.680	0.770
20s combed yarns	1.95	1.95	2.10
Wool tops, N.Y., lb.	3.60	3.60	3.60
CHEMICALS			
Acrylonitrile, tanks, lb.	0.455	0.455	0.455
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.35	1.47	1.18
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.58	0.58	0.58
Formaldehyde, USP, 37% [12% to 15% meth.], tanks, lb.	0.106	0.106	0.106
Glycerine, synthetic, tanks, lb.	0.91	0.91	0.81
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.52	0.52	0.54
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.270	0.270	0.305
Polyethylene resin, low density liner film grade (market price), lb.	0.280	0.280	0.350
Polypropylene, homopolymer grade (market price), lb.	0.350	0.350	0.390
Polystyrene, general purpose grade (market price) lb.	0.350	0.360	0.370
Polyvinyl chloride, pipe grade (market price), lb	.260	.250	.215
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.26	0.30	0.35
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	147.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.36	1.36	1.25
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	318.35	322.35	311.35
Lumber, 2x2, pine, mbf, cl	293.70	289.85	293.25
Plywood, plyform, ¾", msf, cl	584.00	583.10	576.75
Plywood, ⅝", msf, cl	381.55	382.45	384.45
Cement, bulk, ton, tl	64.91	64.91	63.75
Sand, ton, cl	6.36	6.35	6.20
Ready-mix concrete, 3,000 psi/cu yd., 15 cu. yd.	48.00	47.99	46.84
Crushed stone, 1½", ton, cl	7.80	7.80	7.43
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.82	0.81	0.78
Gypsum sheathing, ½"x1"x8", msf, tl	208.19	207.94	207.22
Brick, common, per thousand, tl	183.70	183.70	173.38
Asphalt paving, AC-20	176.69	176.97	169.92
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.14	7.13	7.08
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	21.40	22.25	26.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	29.50	28.75	31.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.775	0.785	0.810
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.754	0.774	0.803
Heating oil, No. 2, Chi., bulk, gal.	0.805	0.768	0.820
Heating oil, No. 2, N.Y., bulk, gal.	0.840	0.770	0.808
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	0.823	0.803	0.785
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.320	0.320	0.420
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	73.00	75.00	89.00
Steel, No. 1, hvy., dlvd., Chi., ton	71.00	71.00	80.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.565	0.550	0.515
Copper, No. 2, East, wholesale buy,	0.480	0.470	0.425
Brass, red, East, wholesale buy, dlvd., lb.	0.525	0.510	0.475
Brass, yellow, East, wholesale buy, dlvd., lb.	0.330	0.330	0.350
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.300	0.295	0.305
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.325	0.325	0.325
Zinc, old, East, wholesale buy, dlvd., lb.	0.110	0.110	0.200
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.100	0.110	0.110
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	10.00	10.00	28.00
Paper, old corrug. box, dlr., N.Y., ton	8.00	8.00	23.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.09	0.09	0.12
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.18	0.19	0.37

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

MANUFACTURING/OEM EDITION

Commodities taking some lumps

The long-term outlook for commodities spells good news for buyers, bad news for sellers, according to the World Bank's new report, *The Outlook for Primary Commodities.*

Some of the more specific price projections over the next decade (in constant dollar terms) are detailed in the accompanying chart. In the case of metals (notably copper, tin, lead, and steel), the forecasts suggest continuing depressed markets. Price boosts will be limited by substitution, environmental constraints, and lingering overcapacity.

Supply excesses are the result of poor demand growth, over-optimism on demand prospects, and the spur to investment provided by the first low real interest rates available since the oil price increases in the early 1970s.

The present metal overcapacity may also be due to the old concern about the depletion of fixed resources and the ensuing government intervention to increase investment.

Some action to correct these imbalances is underway. There already has been substantial rationalization in Japan with respect to aluminum, and in the U.S. with steel, iron, zinc, and copper.

But the impact of all this on prices will be slow in coming. Tags on most of the metals and other commodities should hold in 1990 at below pre-recession highs in 1970s—at least in real or constant dollar terms.

The prognosis is much the same in energy. The study notes that non-OPEC surpluses will moderate through the end of the decade. As a result, while petroleum in *current* dollars could be over $40/bbl by 1990, the increase in *constant* dollars will be marginal—to only $29.50/bbl in 1990.

Equally indicative of softening markets are the relatively restrained demand projections given in the report. The long-term metals picture shapes up like this:

Aluminum: World consumption will increase at only a very moderate 2.9% annual rate through 1995. Growth in industrialized countries will be held down by 1) replacement of aluminum by plastics in construction, and 2) the approaching saturation in the packaging area. Recycling of scrap will also reduce primary aluminum needs and is expected to capture 35-37% of the market in industrial countries by 1995.

Copper: World consumption will grow at only a 1.9% annual rate through 1995—with the advance for industrial countries put at only 1.2%. However, the centrally planned economies will up their yearly take by 2%—and developing countries could show advances of above 4% a year.

Zinc: World demand will show somewhat faster growth here. Reasons: 1) Industrial countries are expected to increase their use of the metal to protect iron and steel against corrosion, and for the development of new galvanized surfaces which may be painted, 2) Downsizing of automobiles is slowing, and 3) New applications are being developed.

Lead: Long-term prospects do not look good. Over the next decade consumption in industrial countries will grow only 1.2% at annual rate. Industrial growth in Japan, however, could be a bit more robust—maybe 2.7% per year.

Nickel: Demand is closely tied to demand for steel since 50% of the metal is used in steel production. Look for little more than 1.5% annual increases through 1995.

Tin: Demand, which has fallen in recent years, should stabilize at 1979-81 levels. Gains seem remote—tinplate, which accounts for 40% of total use, faces stiff competition from other materials. Improved application procedures for tinplate have also reduced requirements. ***PW***

A long look ahead at commodity prices (in constant 1983 dollars)

Commodity	Pre-recession high	1990	1995
Petroleum ($/bbl)	32.7	29.5	36.1
Coal ($/mt)	54	42	45
Cotton (¢/kg)	187	173	175
Copper ($/mt)	1,993	1,577	1,717
Tin (¢/kg)	1,532	1,182	1,200
Nickel, dealer ($/mt)	6,421	4,728	5,140
Aluminum, transaction ($/mt)	1,580	1,488	1,629
Lead ($/mt)	1,195	530	547
Zinc ($/mt)	807	893	900
Iron ore ($/mt)	25.1	22.0	22.0
Bauxite ($/mt)	38.1	33.5	35.2
Manganese ore (¢/mtu)	160	139	139

Source: World Bank

In this section

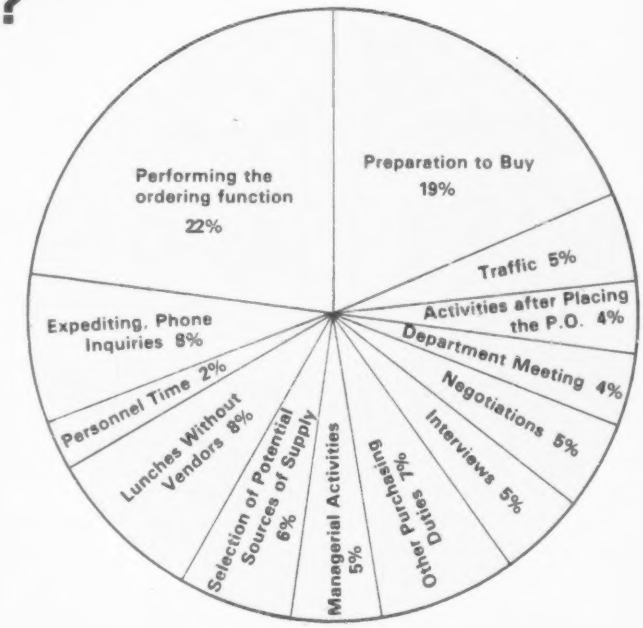
Commodities taking some lumps PW1

Peripherals market enters new growth phase PW2

Procuring quality printed circuit boards PW6

Where does the time go in purchasing?

D. Craig Rathbun and Robert L. Janson,
Ernst & Whinney, Cleveland, OH



THE AVERAGE PERCENTAGE OF TIME SPENT PERFORMING THE PURCHASING FUNCTIONS FOR ALL FIRMS *

* Includes the Director, Buyer & Support Personnel Time

Ten years ago, Dean S. Ammer conducted a study of purchasing and found that a general corporate-wide ignorance existed about what the purchase process actually entailed. He concluded that a gap existed between top management's perception of the function and purchasing management's perception.

Today, with the emphasis on cost containment, the purchasing function has become increasingly important, calling for a need for better understanding and commitment corporate-wide. In order to gain insights into the possible contributions purchasing can make, and to increase understanding of the function, Ernst & Whinney conducted a study of how purchasing personnel currently invest their time.

The object of the study was to determine the amount of time each level of personnel in the department spent on specific activities. It was not our intention to report on productivity or to set standards. We felt that identifying the activities with their associated time expenditure would illuminate the contributions being made by the department to company objectives.

Participating companies

In order to study both small and larger companies in manufacturing and service industries, we asked seven purchasing departments, with from two to 22 purchasing employees to participate. The organizations included a small and two medium size manufacturing companies (M1, M2, M3), a medium size bank (B1), a medium and large size hospital (H1, H2), and a large city government (G1).

The participants included all departmental personnel directly connected with the purchasing function—from directors and managers to expeditors and support personnel. Each used self-logging forms to record the time spent performing each listed activity, which included 13 primary activity groups and 40 subcategories tailored to each company.

We visited each department to view the operations from the inside and to instruct each individual about the study and to answer their questions. The study covered 10 working days.

Conclusions

- The final statistics are remarkably close regardless of the type of organization—banking, manufacturing, health care, or government.
- Many of the directors—prior to seeing the results—had expected to see a much greater expenditure of time on negotiations.
- A surprisingly small amount of time was spent outside the company with vendor representatives.
- In most cases, preparation to buy consumed the largest percentage of directors' and managers' time.

The accompanying tables and charts give detailed results of the study.

How does your company compare?

Depending on the type of industry you are in, you should be able to identify with the characteristics of one of the participating firms. Try contrasting your purchasing department with the findings of this study.

A detailed breakdown of purchasing functions

1. **Preparation to buy:** This category includes all the tasks necessary to begin the buying function.
- reading mail and supplemental material
- processing requisitions
- updating purchasing files
- researching, verifying, and maintaining supplier information

2. **Selection of potential sources of supply:** This category includes all the necessary task needed to provide appropriate information on which vendors can meet the requested need.
- obtaining specifications for POs
- writing/challenging specifications
- value analysis

- consulting between vendors and users
- make, buy, or lease analysis
- vendor visits

3. **Interviews:** This includes the general tasks in discussions with sales representatives.

- sales interviews
- courtesy interviews (company policy to see all sales representatives)
- meals with vendors

4. **Performing the order function:** This includes the tasks necessary to place the actual order.

- typing POs and changes
- proofreading, processing, and signing POs
- posting to records
- filing
- writing correspondence and memos
- photocopying and distributing POs
- miscellaneous typing
- placing the order
- invoice approval
- processing paperwork

5. **Negotiations:** Once potential vendors have been identified, prices, terms, and conditions are established prior to signed purchase agreements.

6. **Activities after placing the purchase order:** This includes the duties once the order is issued.

- delivery acknowledgments
- processing rejections
- processing invoices
- resolving mismatched invoices
- split purchase orders

7. **Expediting, phone inquiries:** This includes the tasks necessary to identify potential delivery problems and follow-up on predetermined quality and quantity requirements.

8. **Traffic, shipping, and receiving:** Includes the tasks which insure that all incoming and outgoing orders are delivered to their proper place.

- arranging freight modes and rates
- receiving discrepancies
- processing freight bills
- tracing inbound
- processing shipping rejections
- handling shipping requests

9. **Organizational meetings**

- formal and informal

10. **Other purchasing activities:** These are activities that must be performed to meet the needs of the firm or institution.

- discussing quality problems
- disposing of scrap and surplus
- claims adjustments
- attending outside activities
- computer applications

11. **Managerial analyses, training, and reporting:** These tasks are necessary to planning, organizing, and controlling purchasing activities.

- planning activities
- analyzing and evaluating vendor performance
- monitoring purchasing activities
- preparing reports
- writing policies/procedures
- training personnel
- handling personnel problems
- project follow-up and analysis

12. **Personnel time**

- break time

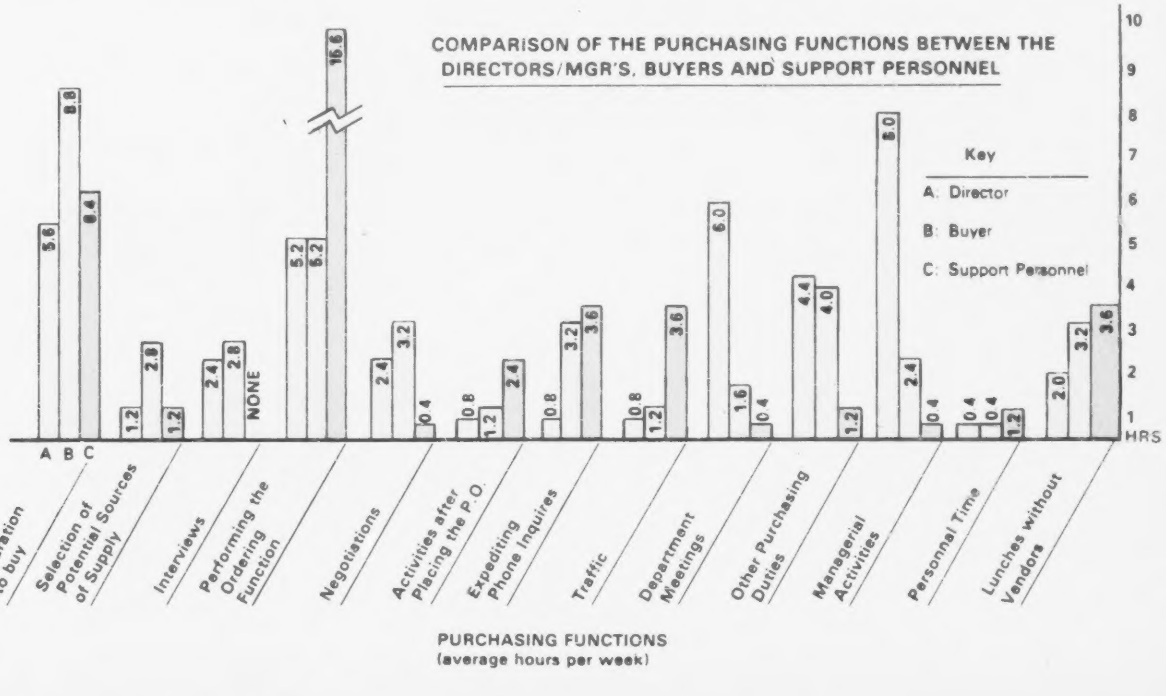
13. **Lunches without vendors**

14. **Miscellaneous non-purchasing duties**

- receptionist
- handling travel arrangements
- telex, operations, telecommunications
- mail room
- warehousing functions **PW**

Ernst & Whinney, the Cleveland-based international accounting firm, provides consulting services in purchasing to many U.S. companies and institutions.

> *The study required only a modest investment of time to record time expenditures by the 13 major categories. If you would like to have your department participate in a further study, please* **Circle 100.** *and the authors will contact you with more information.*


COMPARISON OF THE PURCHASING FUNCTIONS BETWEEN THE DIRECTORS/MGR'S, BUYERS AND SUPPORT PERSONNEL

PurchasingWorld

DEC/1985

ISSUED IN TWO SECTIONS

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Quality is as easy as ECAP for Federal-Mogul

SALARY SURVEY

PurchasingWorld®
Helping you manage the business of buying
Vol. 29 No. 12-December 1985

Features

30 Quality is as easy as ECAP at Federal-Mogul
When a company is as committed to using statistical methods in its production to meet demanding quality standards as Federal-Mogul is, the effect is felt all along the capital equipment supplier chain. Here's how Federal-Mogul is making it work, and work well.

34 The wages of purchasing
How does your paycheck stack up against your peers in purchasing? Find out in this new *PW* survey of purchasing salaries. It tells you where purchasing salaries are now, where they are going, and what purchasing management thinks is important when establishing salaries and when awarding raises. Big gains have been made in the past few years with purchasing salaries up over 13%, and with greater recognition being given to the function and people by management. PMs also feel there should be more emphasis on performance standards and incentives for all purchasing people. 1986 raises look good, too.

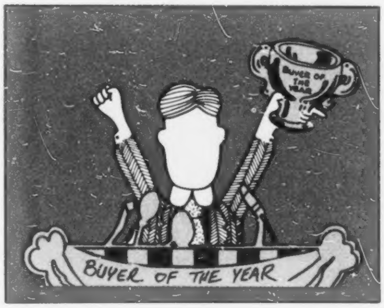
40 Buyer of the year
PW's annual "Buyer of the Year" results are in. Tough competition didn't make the judges' job too easy. But the winners represent some of the best buyers in the business. They are: **Geraldine S. Woodruff**, buyer for Norton Co.'s Sealants Division, Granville, NY, in the 100-499 employee plant size category; **Theodore Jonczak**, senior contracts agent, Florida Power and Light Co., Miami, FL, in the over 500 employee plant size.

46 Get your name on the fire truck
Title to goods isn't everything. Other factors may determine who owns property in a disputed claim. Here's a case where the courts fashioned a new twist in the old notion of title.

54 Slow going on the rate trail
Rate hikes in transportation are not what everyone throught they would be as recently as three months ago. This exclusive quarterly transportation report by Wharton Econometrics gives a mode-by-mode breakdown of where transportation rates are going.

Cover Photo: Federal-Mogul's ECAP program team, left to right: F. S. Stewart, engineering buyer; Douglas Rossman, manager, corporate purchasing; Donald R. Geis, manager, corporate quality assurance; and Thomas Ryan, director—materials.

34



40

Departments

4 PW Pointers
6 Editorial
8 PW Predicts
19 Business Datatrak

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PW PREDICTS

Robert S. Reichard, executive editor

Inflation redux? A wee bit

It's getting to be that time of year when most PMs and other business execs are putting the finishing touches to forecasts for the next 12 months.

And some changes seem to be in the offing. Informal talks with these business people suggest that while prices are not about to take off, we probably have already seen the low point in the general inflation rate. Major reasons:

- **The 20% drop in the value of the dollar since the early part of the year** could add as much as 2% onto the overall price level in 1986. This is based on econometric calculations that every 10% change in the trade-weighted value of the dollar brings with it a 1% change in the price level.

- **Faster money supply growth.** Monetarists claim that a growing credit supply—defined as checking account deposits plus currency—inevitably precedes a speedup in inflation by roughly a year. It has now been about a year since the money supply began to accelerate.
- **A slight increase in labor costs.** If history is any indicator, U.S. productivity gains will slow down and wage gains will quicken as the expansion (now about to enter into its fourth year) ages. Productivity in the non-farm sector has been rising at only 1.2% annual rate for the past six months.
- **The relatively high rate of increase in services costs.** Latest figures suggest that this important sector of the economy is rising at nearly a 5% rate. That's pretty much unchanged from the previous year.

A close look reveals that a bottoming out in the price curve may already be taking place, particularly in the grass roots industrial purchasing sector. True, the latest NAPM Business Survey Committee report shows more PMs still noting lower rather than higher prices. But this gap has been narrowing for two months running. And some members now say the effects of weakening U.S. dollar are finally beginning to affect import prices.

A similar hint comes from a new *PW* survey. Respondents are now talking about a 3.5% overall price increase in the goods they will be buying for the upcoming year.

Nobody is pushing the panic button. Less than one out of ten PMs surveyed expects increases over the next 12 months to average more than 7%.

Some of the new forecasts by top business leaders are in close agreement. The Business Council, for example, sees the GNP deflater (the most inclusive measure of the overall U.S. price level) rising 4.7% over the next 12 months.

Still another sign of potential acceleration comes from the widely monitored Columbia University Center for International Business Cycle Research. This so-called "Leading Index of Inflation" has been edging up for three consecutive months. That's in marked contrast to the virtually uninterrupted slide of the previous 12 months.

It looks like 1986 won't be as easy as 1985. Some advice: Add about 1-2% onto your current year's inflation rate.

Paper

The hotly competitive paper and paperboard industry is likely to stay that way for a while. New capacity should offset the modest increases projected for demand.

On the printing and writing paper front, for example, mills are planning on about a 3.5% increase in overall potential for the upcoming year. This new increase, based on an American Paper Institute (API) survey, is in contrast to the 2.7% boost in demand that is currently forecast for the paper segment of the market.

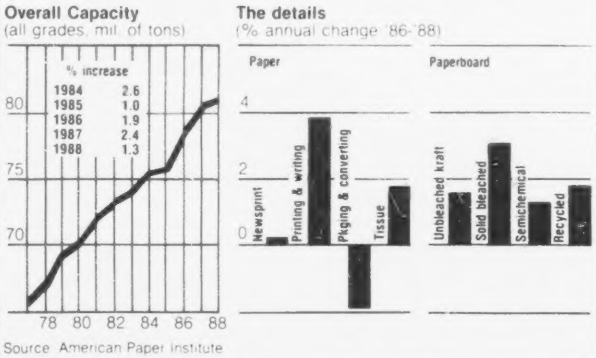
Capacity gains aren't likely to slow down in subsequent years either. The API puts the 1987 and 1988 printing and writing paper gains at 5.4% and 2.6%.

Imports could trail off a bit as the dollar weakens—incoming shipments of uncoated free sheet are already down—but with plenty of excess overseas potential, current overall market softness isn't likely to disappear anytime soon.

The picture is pretty much the same in unbleached kraft paperboard. True, the capacity increases next year are considerably under those anticipated for fine papers—1.7% to be exact. But that's just about in line with the 1.6-1.8% demand gain that API is predicting.

Most mill spokesmen privately admit that any price bounceback to previous highs won't occur any time soon. This certainly seems true of linerboard where prices still remain upwards of $60/ton under the $350/ton quote prevailing in late 1984.

Paper & Paperboard Supply Trends



Source American Paper Institute

Textiles

CURRENT SITUATION: Tough times are beginning to ease a bit in this hard-pressed industry. Mill production has risen more than 10% since January. And mill operating rates are up from 76.5% in January to 84% now. Prices have also begun to edge up, **currently averaging about 1-2% above 1985 lows.** Denims have been strong. Print cloths are firming. But corduroys, sheets, and towels remain soft from being battered by imports.

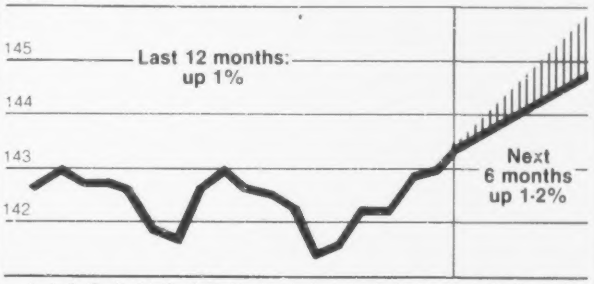
DEMAND: The modest uptrend is expected to continue. But it won't be enough to prevent an estimated 2% drop in overall industry output this year. But **a 3-5% advance is possible for next year** as the industry slowly continues to recover. A positive sign is stabilizing imports. This year imports will be off slightly—in sharp contrast to the 25% and 32% jumps of 1983 and 1984. **Lean pipeline inventories suggest increases in consumption will quickly translate into production gains.**

SUPPLY: No problems here. Imports are topping out but will still be close in 1986 to this year's level. Domestic potential is adequate. Capital spending should hit $1.87 billion this year—about the same as in 1984. That's enough to assure another 2% increase in production potential. Delivery performance should improve as new computer linkups help reduce the need for fabric inventories. **The aim is to cut in half the time from order to delivery to the retailer.**

PRICE OUTLOOK: Any near-term increases should be moderate. This is partly because of import competition and ample supplies. Restrained cost increases could be a factor. Raw cotton, for example, could stay in the mid-to-upper 50s range. And polyester staple will find it hard to advance above its low 67-68¢/lb current level. Labor's current 4% increase tells the story there. **Count on about a 1-2% average mill product rise through mid-1980.**

Textile mill products

(Index: 1967 = 100)



Robotics

A new survey reveals that the U.S. is the now the fastest growing market for these productivity-enhancing machines—with a 411% growth anticipated over the 1985-90 period. And by the latter year, we will surpass Japan as the biggest consumer of robotics. Moreover, the overall U.S. industrial automation market (which includes robots) will grow almost as fast--from $8.1 billion this year to $41.3 billion in 1990. Software will be the biggest gainer, accounting for 17% of all industrial automation dollars by 1990 compared to only 8% currently.

Zinc

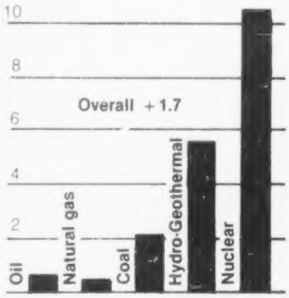
Prices are still heading south. Domestic quotes are now down to the low 30s range. That is in sharp contrast to the the near 45¢/lb level of earlier this year. And no major turnaround is expected despite newly announced production cutbacks. Reason: The big construction and transportation markets, which account for 70% of all U.S. use, will be lucky to reach 1985 levels in 1986. Upshot: Domestic consumption will do little more than stay at this year's disappointing 1.2 million ton level.

Energy

Demand gains are likely to be quite modest next year. A new projection by the Independent Petroleum Association of America (IPAA) puts gains at only 1.7%. For oil and natural gas, the increases are even smaller—only 0.6% and 0.4%. Since GNP is expected to grow at about a 3% rate, the new figures suggest more efficiency gains. Specifically, the nation will use only 43.9 thousand BTU per 1972 GNP dollar—off another 1% from 1985 levels and 29% from pre-OPEC days.

1986 Energy Demands

(% increase of 1985)



Steel

Next month could provide the test as to whether major moves to shore up prices and make them more realistic will work. Included in the new price actions are flat-rolled products, oil country tubular goods, hot rolled bar, and semifinished products. Right now, the betting is that the increases face some rough going. Reasons: (1) Demand remains weak (next year's domestic shipment will be hard put to top this year's estimated 73 million tons), and (2) imports continue to have a major im-

PW PREDICTS

Copper

CURRENT SITUATION: Copper continues to see-saw in the mid-60s range. Behind the softness which has dropped tags from the 70¢ levels of earlier this year: (1) recent problems with tin on the London Metal Exchange (LME), (2) lackluster final demand, (3) hand-to-mouth buying on the part of users, and (4) all-out production by Third World producers. The Free World operating rate remains at the 80% level. **Another price depressant is high inventories.**

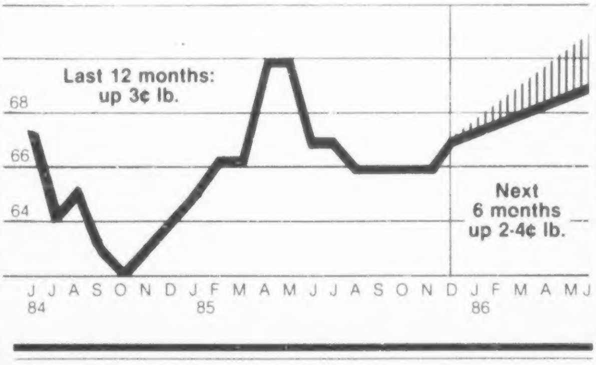
DEMAND: U.S. consumption will likely hit only 2.2 million short tons this year. And little change is seen for 1986 as two key markets—autos and construction—take a breather. This same pattern is seen for the entire Free World. This year's chewup is put at 7.42 million tonnes—off 1.5-2% from last year. Here again the pattern will be flat for 1986. Sign of the times: **Buyer reticence to nail down next year's contracts and more emphasis on spot purchases.**

SUPPLY: The fact that 55% of global output is state controlled should dictate continued all-out production in many areas. The U.S. excess is on the order of 45%. Not even the upcoming 1986 labor negotiations (here and in Canada) have anyone worried. A strike seems unlikely. **And there is new capacity waiting in the wings.**

PRICE OUTLOOK: There is little to suggest any rally over the next six months or so. Prices could edge up to the lower 70s by next spring. Considering the 82¢/lb quotes of mid-1983, that isn't much. But anything much above 70¢/lb could bring on spate of mine reopenings. **About half our domestic producers could break even if prices bounce back to around 75¢/lb.** At that level, overseas producers (whose average costs run about 58¢/lb) could turn a handsome profit on any marginal increase.

Producer copper prices

(cents/lb)



pact (1985 totals still account for 25% of the market).

Office space

More unrented space is coming on the market, thus assuring continued price concessions into the new year. About 16.5% of the available downtown space is vacant. Suburban excess is put at 21.2%. Downtown areas with the highest vacancy rate are Oakland (24.2%), Denver (24.1%9, Miami (24.1%), Oklahoma City (23.4%), and San Diego (23.6%). One exception to the glut is midtown Manhattan where the rate is now at 7.4%.

Unbleached kraft paper

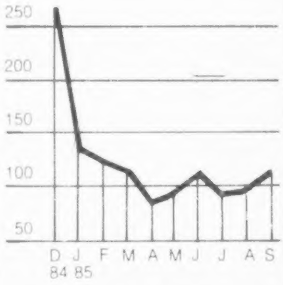
This small segment of the paper industry is bucking the overall soft price trend. Reason: The closing down of excess capacity (some 700,000 tons of capacity will be shut down by sometime next year). This, in turn, has helped to knock about 10% off this year's production totals. As a result, the previously existing $30/ton discounts on grocery sack kraft and multiwall paper are beginning to disappear.

Computers

Home computer bargains are proliferating. The discounted IBM PCjr with color monitor can be had for as little as $600. And Apple IIcs, which list for just under $1,000, are available for only $800. Plenty of competition in the more sophisticated PC sector, too. Korean-made IBM compatibles are selling for only $1,495—well under a comparably equipped IBM PC. In many cases, extra discounts are available on packages which combine the basic computer with higher-priced printers and other accessories.

Microcomputer Sales

(units: March '84 = 100)



Platinum

The silver-white metal may be ready for more boosts, perhaps into the $400/oz range by the middle of 1986. In part, this can be attributed to troubles in South Africa where some 90% of the Free World supply comes from. But there's another factor—good demand (estimated at 2.8 million oz this year, some 7% above last year). Producers will be hard put to keep up with all this. There is even the possibility that a shortfall of 100,000 oz could materialize this year. The snugness could also generate some hedge buying, further adding to the upward pressures.

Methanol

Prices of this key chemical have eased off after a midyear surge which brought tags close to 50¢/gallon. Reason: The temporary supply problems have been overcome and the market is again awash in a global glut. Gulf Coast prices are now down in the 38-39¢/gallon range. Also, imports are coming in at an annual rate of 280 million gallons a year (about 20% of the U.S. market). It is hard to see prices again breaking the 40¢/gallon barrier, certainly not in the next six months.

Office product prices

Overall prices for office products are likely to fall 0.4% over the six-month period ending next April, according to findings of a Quill Corp. survey of the nation's leading office product manufacturers.

This reverses the modest upward trend of the previous six months when price averages moved up about 1.2%. But there are some product-by-product variations. Binding systems and data and word processing supplies are expected to decline 5% and 4% respectively.

On the other hand, forms and reproduction products are both expected to rise in excess of 2% over the same period.

The Lincolnshire, IL-based office products dealer attributes the general weakness to overly optimistic growth projections. Quill's president, Jack Miller, says "these projections were based on widely reported trends toward a service-oriented economy. When office product manufacturers geared up for this growth, they created an overcapacity."

Miller adds that the bulk of competition is expected to occur among domestic manufacturers, with foreign competition more significant in writing instruments and high technology product areas.

The office product price outlook into early 1986

Product line	% change Nov. '85-April '86
Data & word processing supplies	– 4.06
Typewriter supplies	0.33
Reproducing products	2.70
Filing supplies	1.50
Envelopes	0.76
General office paper	0.56
Forms	2.14
Dated goods	0.22
Binding supplies	0.76
Binding systems	– 4.99
Binding accessories	0
Writing instruments	– 1.06
Tapes and tape dispensers	– 0.50
Warehouse and shipping supplies	0.17
Furniture	– 1.06
Office machines (ex computers)	– 0.64
Miscellaneous supplies	– 1.57
Odds and ends	– 0.53

Source: Quill Corp

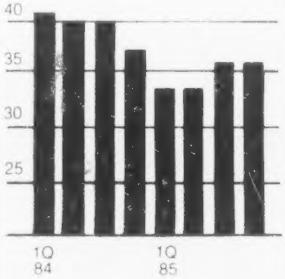
Aluminum

Ingot tags remain in the low mid-40s range as a result of a combination of (1) hand-to-mouth buying by users, (2) rising secondary ingot supplies (up 15-20% this year), and (3) less-than-hoped-for inventory paring (Free World stocks still run over four million tonnes—not that much under the 4.25 million tonne reading of a year ago). Note, too, that sheet prices are at a ten year low. U.S. mills are still cutting back, operating at only 67% of their potential. Even so, any price recovery will be slow. There is little chance for ingot breaking the 50¢/lb barrier any time soon.

Polypropylene

Little near-term price firming is anticipated, despite continued high operating rates and demand which looks to be up as much as 10% this year. Major reason: Competition from polystyrene where prices remain relatively low. Best bet: A continuation of current low tags (35-37¢/lb for the key homopolymer grade) through year end and into early 1986. But some advances are possible next spring if current forecasts calling for a further 5% increase in demand materialize. Such gains could push operating rates into the 94% range.

Polypropylene Prices
(Homopolymer grade)
(Transaction price ¢/lb.)



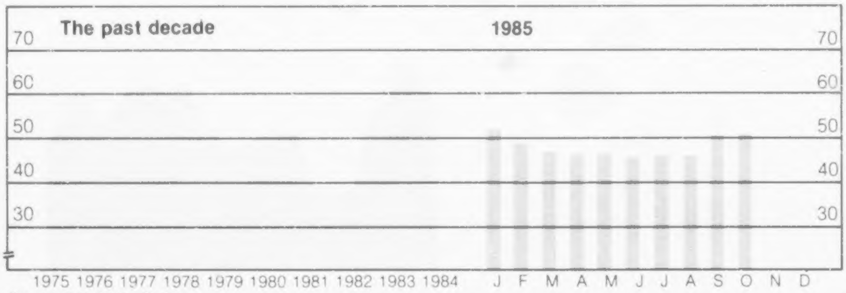
Lead

The heavy metal can't seem to break through the 20¢/lb barrier despite the height of the battery buying season. Largely, this is due to the mild winter last year which reduced battery demand. And there is the continuing phaseout of lead in gasoline. Overall U.S. consumption should continue to sink from about 1.15-1.20 million tons this year to about 1.10-1.15 million tons in 1986. This, in turn, would seem to assure under 20¢/lb quotes through at least next spring.

BUSINESS DATATRAK

NAPM business barometer

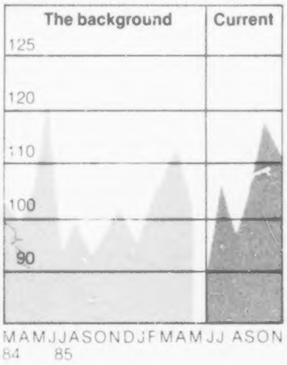
Based on five indicators (employment, inventories, new orders, production, vendor performance)



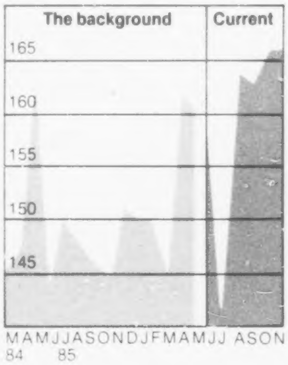
Source: Commerce Dept

Leading indicators

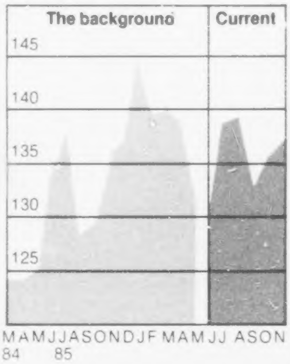
1. Consumer buying plans
(Index: 1969-70 = 100)



2. Construction awards
(Index: 1977 = 100, seas. adj.)



3. Help wanted
(Index: 1967 = 100, seas. adj.)



KEY ECONOMIC TRENDS

Up, up but not away

Fourth quarter business gains should be close to the modest third quarter levels—with similar advances also seen for early next year.

Preliminary October-December figures suggest about a 3% or slightly higher GNP increase for the period. And continuation of the gains into the first quarter of 1986 seems pretty much assured as indexes of leading indicators continue in the plus column. For example, the bellwether NAPM Business Barometer is now firmly above the neutral 50 level.

Also, there is nothing on the horizon to indicate any major shift for at least another few quarters. Positive factors at this time would have to include (1) continued low inflation rates, (2) inventories which remain surprisingly low for a business recovery now entering its fourth year, (3) a somewhat lower dollar that should break imports and spur exports, and (4) relatively easy money.

More reassurances on the money front come from recent Fed statements that it will not move aggressively to tighten credit. This, in turn, means short-term interest rates (used for financing consumer debt and working capital needs of business) will remain about where they are through the foreseeable future.

One of the factors keeping credit easy could be the continuing desire to push the dollar down. It is fairly clear that the Fed wants to see more weakening of the dollar which has already fallen about 20% since its high of last February.

Consumers, meantime, continue to spend freely. With disposable income still rising, it looks like a record Christmas season lies ahead. Sales over the holiday period are expected to be up anywhere from 4-6% over last year.

Plans to buy new cars have fallen off a bit following the late summer spurt brought on by Detroit's interest rate concessions. But even here the prognosis isn't bad. The average car is still 7.5 years old and drastically restyled vehicles should continue to attract buyers.

A look at other consumer areas shows spending still heading up. For example, the Conference Board's buying plan index remains close to recent peaks. Near-term gains are anticipated in major appliances where purchase plans have hit a new seven-year high.

The consumer isn't quite as overextended as debt-income ratios would seem to suggest. Almost half of the debt is owed by households in the highest income quintile—people who are best able to service it, if not take out more.

And increasing use of credit cards for convenience tends to distort debt-income ratios upward. Net out this convenience factor and the ratio would probably dip about one percent.

Construction is also holding up. Take a look at new construction award figures. Not only are they at new record highs, but the outlook is for more gains in 1986.

This is confirmed by a McGraw-Hill forecast that projects a 2% increase in next year's contracting totals, led by a 7% jump in residential activity.

The check is not in the mail

The nation's suppliers are starting to become a bit more concerned about slow payments.

A current National Association of Credit Management (NACM) survey suggests a modest stretch-out in days' sales outstanding over the next six months. About 39% of the NACM survey respondents see additional foot dragging on bills—more than twice the 15% who feel some decline is possible.

This 39% reading reverses the downward trend of just three months ago when a similar survey was taken. It is also the largest such number since early 1983.

Another study, by TRW's Information Services Division, notes that about one out of four customers does not pay on time.

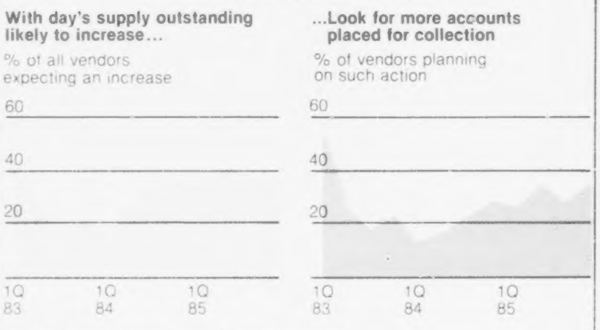
For many industries the performance is even worse. A more than 30% delinquency rate is noted by vendors in such key industries as apparel, plastics, control devices, data processing equipment, electrical equipment, office equipment, furniture and fixtures, construction machinery, fabricated metals, steel, and nonferrous metals.

Given this kind of climate, it is not surprising that more than seven out of ten vendors responding to NACM's survey say slow paying customers are now a serious problem.

Suppliers are responding. Some 35%, for example, expect to increase the number of accounts placed for collection.

Another approach currently being contemplated is more use of service/interest charges on past due accounts (some 17% plan additional use of this tactic). And 41% say they are planning on more stringent credit policies—compared to only 5% who feel some easing is in order.

Accounts payable trends



Source: National Association of Credit Management

Still healthy

Electronics industry demand remains solidly in the plus column (at least on an overall basis). But it isn't likely to match the 17% dollar advance of 1983.

That's how Henderson Ventures sees things. Analysts at the California-based electronics consulting firm, assuming a flat GNP curve, expect only about a 9% gain in total equipment sales next year—not much different from this year's 10% advance. Even in 1987, when the economy is expected to pick up some steam, only modest acceleration is projected.

But all this should not obscure the fact that electronics is still a prime growth industry. Note that the 13% dollar increase projected for 1987 is roughly three times the real GNP growth expected for that year.

Generally, most industry groups will share in the forecasted gains, although cyclically sensitive consumer-oriented products could fall into the negative column next year before rebounding smartly in 1987.

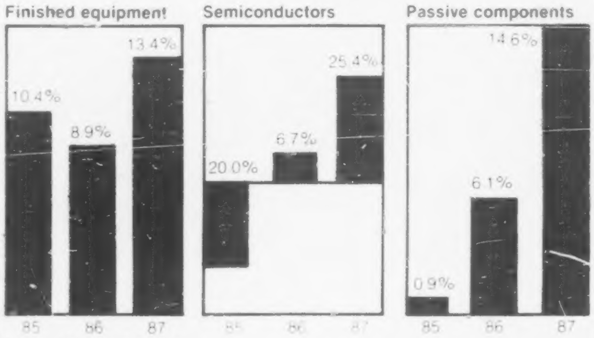
Similar volatility is also anticipated for electronic components. Specifically, this year's disappointing semiconductor showing (dollar totals off more than 20%) should give way to a 7% advance in 1986 and a strong 25% spurt the following year.

But Henderson Ventures hastens to add that overcapacity will continue to depress average semiconductor selling prices even as unit demand is experiencing a moderate pickup. Full recovery in both the pricing and demand spheres is not expected until the following year (1987).

The outlook is somewhat less volatile for passive components which, in contrast to semiconductors, managed to remain in the plus column—though barely—this year.

Electronics industry demand trends

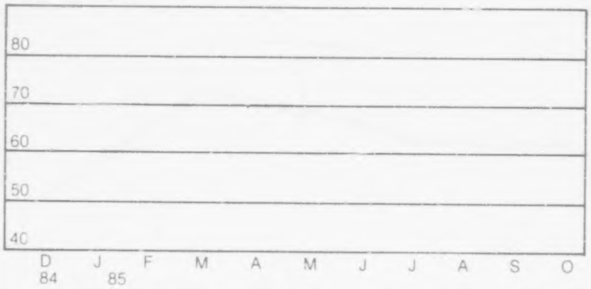
(% change in current dollars)



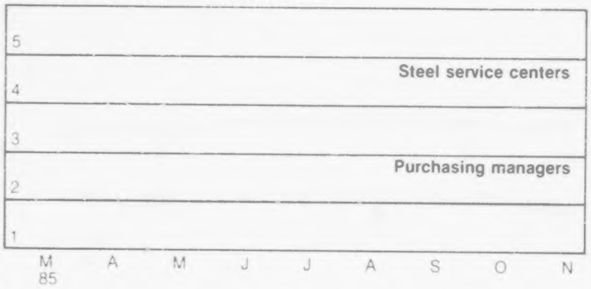
Source: Henderson Ventures

Steel

Operating rates

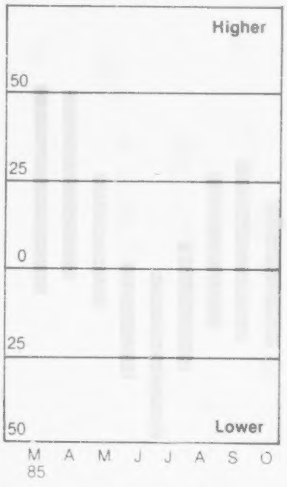


Inventories (months supply on hand)

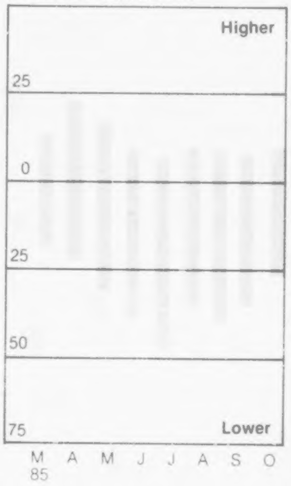


Demand

Service centers incoming orders
(Percent of respondents)



Steel buyer purchase
(Percent of respondents)



Import prices (compared to domestic)

Steel buyers

Above	3%
Same	15%
Slightly below	73%
Substantially below	9%

Service centers (carbon)

Above	0%
Same	11%
5-10% below	81%
10-20% below	8%
Over 20% below	0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

Jury out on near-term steel outlook

Steel buyers remain on the bearish side. Those expecting to cut down their metal intake over the next few months now outnumber those expecting an increase by about 3:1.

However, distributors responding to the latest Steel Service Center Institute (SSCI) survey are somewhat more optimistic. They see incoming orders over the next few months on a fairly high plateau.

Even this doesn't tell the whole story. SSCI president Andrew Sharkey cites strong gains in stainless steel. This product line recently registered its best shipping month since survey results were first tallied back in 1978.

Other reports indicate that structural steels have been doing well lately—especially in the Midwest where an office building boom has fueled distributor demand. But even in the service center sector there's a note of caution. Sharkey notes that while defense and automotive markets have been doing well, some areas have been experiencing declines in both new and unfilled orders. He adds that not all geographic regions have been benefitting from recent increased activity.

Distributors as a whole seem to be headed for a record year. Year-to-date shipments top 1984 performance by about 4%.

If this pace continues, service center shipments could hit a new 21.5-22 million ton peak.

All this is in sharp contrast to overall mill performance where shipments for the year are expected to reach only about 73 million tons—little changed from last year's readings.

The reasons for this better service center performance are easy to see: upgraded distributor services, and the industry's ability to capitalize on its traditional strength of holding a customer's inventory—shipping only the tonnages needed by manufacturers for immediate use.

Whether it's the increased service center role or only better internal management, one thing is clear: Steel users are doing with substantially less inventory. Today the average steel user has less than a 2-month supply on hand —9% under highs prevailing as recently as early summer.

These same steel buyers also seem determined to bring their inventories down even further. Thus in response to a question on inventory trends over the next six months, more than half said they were considering further stock decreases--far outweighing a small 6% who felt that some increases might be in order.

Another reason for all this might be the ready availability of virtually all steel products. Not one single service center currently anticipates any problems over the next six months. And in the case of steel buyers, only one possible problem area has been noted—coated sheet. And here the problems are isolated rather than across the board.

The new surveys also suggest that there are still plenty of import bargains around. Some 8% of service center respondents say they get price breaks of 11-20% in carbon steel—with 23% reporting the same kind of price discounts for stainless.

Steel buyers are still fairly successful in finding overseas bargains. Specifically, some 9% say overseas mills continue to offer prices substantially under comparable domestic levels.

How much longer will all this continue? The answer is up in the air given stepped up policing of steel import quotas. Not one service center expects to increase dependency on foreign steel in the months immediately ahead. And the comparable figure for steel buyers has dropped sharply—from 21% in September to only 9% at latest report.

PROCUREMENT STATUS

You can get what you want when you want it!

Chalk up another month of virtually no change in overall leadtime performance.

More than 90% of the more than 150 product lines regularly monitored by *PW* show no leadtime changes. And even where there have been some stretchouts, they have been effectively offset by improved performance in other sectors.

The reasons for this situation are fairly obvious. For one, while demand has been inching up, so has new production potential. Result: The average U.S. operating rate remains stuck in the 80% range—far enough under preferred levels to assure continued fast deliveries.

The number of purchasing managers reporting faster deliveries over the past month still exceeds those reporting slowdowns—but the gap is beginning to narrow. Latest numbers here: 7% speedup vs. 6% slowdown.

Another positive sign is continued inventory paring. It suggests that most industrial buyers are still confident that they can get what they need when they need it. In fact, only 14% of those queried (an all-time low) are ordering 90 days or more in advance.

Equally reassuring is the fact that the NAPM short-supply list is again devoid of items. It has been that way for nine consecutive months—a good indication that there is enough excess capacity in the economy to take care of both recent demand gains and those that are expected over the next few months.

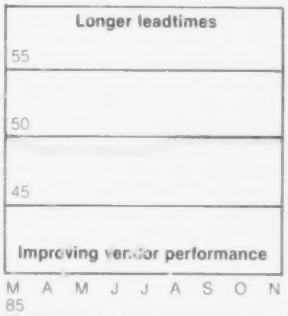
Also, there is the continued absence of any demand-pull pressure on prices. Again, NAPM survey results show that those noting declines outnumber those noting increases for about 11 consecutive months now.

Items currently on the "soft" list now include aluminum, steel, vegetable oil, fuel oil, coal corrugated containers, caustic soda, methanol, phenol, and several petroleum-based chemicals.

Monthly procurement status report

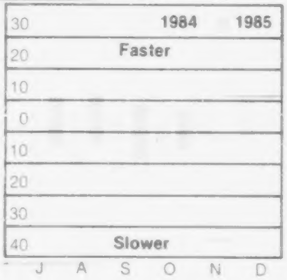
Leadtime index

A "diffusion" index based on 158 key commodities. Avove "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.

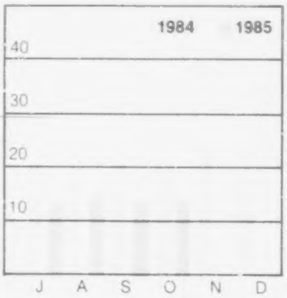


Delivery performance

(Percent reporting deliveries)

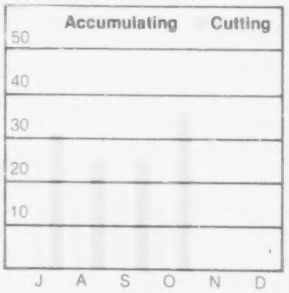


Forward commitments



Inventory strategy

(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Offset paper leads have doubled to 4-5 weeks. Coming in (weeks) are coated/galvanized sheet (7-8), stock brass and copper sheet, rods, and tubes (1), plyform lumber (2), PVC resins (2), and resistors (6-12).

Cleveland: Modest stretchout in lumber items to these weekly leads: Hardwood (3), softwood (3), and skids (3). Also moving out are plastic shrink film (3-4), coil coating paint (5-6), and maintenance paint (2). Shorter leads for PVC resins (2) and plastic packaging materials (2-3).

Los Angeles: Galvanized steel waits have dropped to 6-8 weeks. Grey iron castings are stretched to 8-10. Other leads: brass castings (4-6), domestic fasteners (4-6), electro-mechanical devices (6-8), standard bearings (20-24), standard valves (10-12), and aluminum sheet (12).

Houston: High pressure heat exchangers are off a month to 6-9. Not much change elsewhere with these weekly leads: pumps (17-31), corrugated containers (2), motor control centers (13-26), plastic bottles (4), and stainless fasteners (8-10).

Philadelphia: Minor stretchouts in IBM tab cards (to 3-4 weeks). Xerographic paper (now 1-2) and polyethylene bags (2-3) have come in a bit. Few changes elsewhere.

Pittsburgh: Tin shipments (ton lots) have come in sharply to 4 weeks. Little change in other lines: paint (4-5), polyethylene (5), PVC (6), alloying metals (2), steel strapping (2-3), seals (1-2), multiwall bags (6), corrugated and folding cartons (3-4), and drums (1).

The wages of purchasing

Robert R. Blumel,
managing editor

O.K. everybody, pull out your paycheck stubs and compare them with the results of the latest PW annual survey of purchasing salaries. Then photocopy the material here and place it in a strategic location around your boss's office.

Some wag once remarked that laws and sausages were made in the same way. It's a process of throwing in pieces of this and bits of that, grinding them up, and seeing what comes out in the end. That may be true of laws, but a comparison of surveys and sausages may be more apt. A good survey has to have some substance behind it. It can't be bits and pieces. The sample and the data collected have to make sense or the results are suspect.

The sample for this latest *PW* survey was carefully selected to give a broader, more comprehensive view of salary structures and to obtain more complete data directly from purchasing management. The questionnaire was mailed to top purchasing and materials management executives at over 2,000 major companies selectively distributed throughout the U.S.

Management is generally in a better posture to know what salaries actually are, what raises are going to be, what factors are considered most important when setting salaries or awarding raises, and other key considerations. It's logical that surveying them produces a more complete cross-section and more reliable results than could be obtained by surveying individuals holding specific positions.

On the flip side, because the survey was of management, the views expressed about job satisfaction, and other questions, do not, of course, reflect the views of all purchasing people. In fact, some questions were omitted from the questionnaire for this reason.

The important issues are where salaries are now, where they are going, and what a purchasing person should do to get ahead. To find that out, management is the source. Besides, it's always good to know what the bosses are thinking.

The good news is...

Raises for 1986 should average in the 6-8% range for most industries and even higher in some specific industries—exclusive of bonuses and incentives. (One of the few industries surveyed that isn't in the 6-8% league is textiles which has been taking some licks lately).

Projecting this, overall purchasing salaries will have increased by 13.4% on average for 1985 and 1986 together. Even adjusted for inflation, increased social security contributions, and other paycheck parasites, you still come up with several percentage points gain in real disposable income out of the raises. And that is good news.

Seeking incentives

In response to a question about suggestions for purchasing compensation, a large number of managers said they felt purchasing should be compensated on a salary and incentive basis similar to sales. The suggestions ranged from incentives based on stretch goals, savings on

Composite salary ranges

VP purchasing
High avg.: $181,900
Mode range: $71,790-$105,209
Low avg.: $41,600
Median: $88,500

VP materials
High avg.: $201,020
Mode range: $88,294-$127,614
Low avg.: $57,213
Median: $108,000

Purchasing director
High avg.: $136,707
Mode range: $61,348-$83,490
Low avg.: $52,112
Median: $72,400

Materials director
High avg.: $122,613
Mode range: $61,520-$79,211
Low avg.: $49,712
Median: $70,400

Purchasing manager
High avg.: $102,391
Mode range: $40,211-$61,702
Low avg.: $32,614
Median: $51,000

Materials manager
High avg.: $118,009
Mode range: $51,118-$72,307
Low avg.: $38,401
Median: $61,700

Purchasing agent
High avg.: $84,789
Mode range: $37,024-$49,506
Low avg.: $34,820
Median: $43,300

Senior buyer
High avg.: $73,281
Mode range: $34,510-$43,920
Low avg.: $29,400
Median: $39,200

Buyer
High avg.: $58,907
Mode range: $28,141-$36,661
Low avg.: $21,403
Median: $32,400

Junior buyer
High avg.: $42,236
Mode range: $22.600-$27,500
Low avg.: $19,613
Median: $25,150

Expediter
High avg.. $46,706
Mode range: $19,257-$27,365
Low avg.: $14,404
Median: $23,300

Trainee
High avg.: $31,339
Mode range: $18,700-$25,300
Low avg.: $15,900
Median: $22,000

High = Highest 10%
Mode range = Most frequently appearing salaries
Low average = Lowest 10%
Median = Average of middle 80%
based on 2,394 positions surveyed

purchasing budgets, contributions to the bottom line, to basing compensation and incentives on the size of purchasing expenditures handled.

This interest in incentive compensation seems to reflect the need for greater recognition of what the purchasing function actually contributes to the overall operation and economic health of a company. And, judging from the comments and results of the survey, there seems to be an increasing recognition by managements of the importance of the role of purchasing. One comment, from a PM in a $500 million company, tells the point. He says: "Purchasing at our company is finally being recognized as a very important contributor to corporate operations and objectives. We've worked hard for this recognition and now the company is rewarding us with better salaries and incentive plans. It's a lot better environment now, and it has motivated our people to do an even better job."

Factors in salaries and raises

If you're looking for a good raise, take heed. Managers say the two most important factors they consider in determining raises are performance (62%) and experience (25%), as opposed to education (9%), seniority (2%), and other considerations (2%).

For educational achievements as a factor in determining salaries, most (47%) managers rank a bachelor's degree and a MBA (21%) as the most critical. And although only 13% ranked the Certified Purchasing Manager (C.P.M.) certification as their primary consideration, nearly half (46%) ranked it as their second most important choice. This is particularly noteworthy because there are currently only about 12,000 C.P.M.s in the nation, but the recognition being accorded this distinction seems to be significant and growing in importance.

Salary comparisons

Most (86%) purchasing and materials management managers consider themselves fairly compensated for the work they do. Only 12% said they were not fairly compensated and most of these negative responses were from PMs in smaller

*Purchasing salaries by company size

	Average	To $0.5 billion	$0.5-1.0 billion	$1.0-4.0 billion	$4.0 billion plus	Composite average
VP purchasing	HIGH	75,000	93,742	107,600	146,100	82,900
	LOW	45,500	51,700	65,900	79,600	
VP materials	HIGH	★79,900	85,400	111,100	130,700	81,800
	LOW	52,400	52,500	60,400	79,800	
Purchasing director	HIGH	62,800	70,300	79,100	99,200	65,700
	LOW	44,100	55,000	55,400	59,700	
Materials director	HIGH	54,700	73,200	76,300	90,000	65,900
	LOW	49,700	55,600	55,700	64,600	
Purchasing manager	HIGH	48,300	50,500	60,000	72,100	44,300
	LOW	34,100	38,500	39,900	45,000	
Materials manager	HIGH	48,000	56,800	61,250	70,100	48,600
	LOW	36,700	40,100	47,500	45,000	
Purchasing agent	HIGH	44,600	45,000	47,200	50,000	40,200
	LOW	29,100	33,500	36,100	36,000	
Senior buyer	HIGH	39,000	41,300	44,400	45,000	37,000
	LOW	28,600	27,500	35,000	37,500	
Buyer	HIGH	30,000	32,500	33,300	44,000	30,300
	LOW	24,100	25,000	25,500	28,000	
Junior buyer	HIGH	27,500	27,300	29,000	28,000	26,400
	LOW	18,900	18,700	18,500	18,000	
Expediter	HIGH	20,400	26,000	27,100	32,000	22,700
	LOW	12,000	18,700	21,300	24,000	
Trainee	HIGH	18,500	20,100	24,000	31,000	20,300
	LOW	14,400	16,200	18,500	20,000	

Based on 2,386 positions surveyed nationwide. * Salaries rounded to nearest 100.

★ Sample returned for this position was inadequate to reflect a realistic average.

Purchasing salaries by region

	Average	Northeast	Midwest	South	West	★U.S. average
VP purchasing	HIGH	115,700	109,654	101,494	100,840	114,827
	LOW	77,509	73,209	61,478	63,700	69,419
VP materials	HIGH	132,000	127,900	118,231	113,500	129,000
	LOW	84,720	92,610	74,820	65,900	74,626
Purchasing director	HIGH	74,920	76,831	74,250	80,107	81,306
	LOW	50,622	49,940	49,120	50,260	47,500
Materials director	HIGH	73,291	74,621	70,480	74,230	85,929
	LOW	50,856	53,990	55,210	61,117	61,367
Purchasing manager	HIGH	58,903	57,721	54,840	59,211	58,943
	LOW	39,699	34,200	35,911	35,116	33,721
Materials manager	HIGH	59,810	64,000	61,210	65,000	65,832
	LOW	36,605	35,410	36,290	38,000	35,100
Purchasing agent	HIGH	41,092	44,700	42,907	49,881	47,320
	LOW	33,100	31,220	30,642	33,950	31,736
Senior buyer	HIGH	39,812	40,015	38,915	44,267	43,750
	LOW	29,620	29,078	29,164	28,905	29,911
Buyer	HIGH	33,900	31,000	29,908	35,681	32,676
	LOW	23,474	24,500	22,717	24,815	24,033
Junior buyer	HIGH	26,312	24,129	25,850	28,169	27,629
	LOW	20,118	21,054	19,624	21,320	20,130
Expediter	HIGH	26,920	29,886	24,676	30,010	28,049
	LOW	16,068	19,707	15,700	21,990	18,024
Trainee	HIGH	24,873	24,526	22,182	26,555	23,760
	LOW	17,100	16,735	15,000	20,904	17,815

Based on 2,291 positions surveyed nationwide.

★ Not an average of regional averages. Based on 2,440 positions, separately calculated for all industries and regions.

firms. Some other key findings:

- When asked how purchasing raises compared with those in other departments in their company/division, 13% said they were better, 22% said they were worse, and 59% said they were the same.
- How do purchasing salaries compare with those in other departments in the company? Most (63%) said they were the same, 12% said they tended to be higher, and 16% said they were lower.
- And when compared to comparable occupations, 21% of the surveyed managers said purchasing salaries were higher, 17% said lower, and 57% said they were equal.

In general, there appears—at least from the management point of view—to be a very upbeat, positive feeling in the purchasing profession. Judging from the comments of the respondents to this survey and the answers to the questions, gains have been made in salaries, raises, and in recognition by management that the purchasing function and purchasing people are vital contributors to corporate success. **PW**

Average 1985 pay hikes and projected 1986 hikes by industry

		Food tobacco, & related products %	Transportation, shipping & related services %	Energy %	Textile mill, apparel, leather %	Rubber, plastics, products %
VP purchasing	1985	7.2	6.9	7	4	6.5
	1986	5-7	5-7	5-7	4-5	6-7
VP materials	1985	6.1	★	5	3.9	6.7
	1986	5-7	★	6-7	★	6-8
Purchasing director	1985	6.7	6	5.4	4.5	6.3
	1986	5-7	5-7	6-7	4-5	5-6
Materials director	1985	★	★	★	2	6.8
	1986	★	★	★	2-3	7-8
Purchasing manager	1985	7.5	6.7	7.4	4.1	6.9
	1986	6-8	5-7	6-8	4-5	7-8
Materials manager	1985	★	6.3	7.2	★	6.9
	1986	★	5-7	6-8	★	7-8
Purchasing agent	1985	7.7	7.1	7.7	4.2	7.2
	1986	6-8	6-8	6-8	3-5	7-8
Senior buyer	1985	7.2	7.2	7.1	4.0	7.0
	1986	6-8	6-7	7-8	3-5	6-8
Buyer	1985	7.5	6.5	7.9	4.9	7.4
	1986	6-8	6-7	7-8	5-6	6-8
Junior buyer	1985	7.1	6.7	7.4	4.2	7.7
	1986	6-8	6-7	6-8	4-5	6-8
Expediter	1985	7.3	6.6	7.4	★	7.0
	1986	6-8	7 +	6-8	★	5-7
Trainee	1985	7.7	6.9	7.1	★	7.9
	1986	6-8	7 +	6-7	★	6-8
Overall composite (all industries/all positions)					1985	6.63%
					1986	6-8%

Based on 2,286 positions surveyed.

★ Insufficient data.

Purchasing salaries by industry

		Food tobacco, & related products	Transportation, shipping & related services	Energy	Textile mill, apparel, leather	Rubber, plastics, products	Electric, electronics equipment	Communications, electric service
VP purchasing	HIGH	103,000	129,800	105,700	93,000	103,700	102,600	125,000
	LOW	58,100	85,700	83,000	60,000	65,500	65,087	75,100
VP materials	HIGH	155,000	203,900	★	★	102,600	125,000	133,400
	LOW	118,000	151,600			83,400	75,000	★ 75,700
Purchasing director	HIGH	68,200	71,000	125,000	60,000	74,200	71,000	67,300
	LOW	45,500	45,000	★ 58,000	40,000	42,700	55,000	50,600
Materials director	HIGH	85,500	80,000	★ 89,900	61,000	64,200	74,000	82,600
	LOW	60,000	58,900	60,000	55,000	53,000	57,200	53,900
Purchasing manager	HIGH	55,000	72,300	81,400	51,900	59,700	52,000	58,900
	LOW	40,700	42,100	50,700	36,200	41,200	36,000	42,700
Materials manager	HIGH	56,100	42,800	★ 63,100	★	48,700	66,600	57,900
	LOW	40,000	31,500	45,900		39,200	39,000	39,700
Purchasing agent	HIGH	45,000	41,000	46,200	37,200	45,300	45,000	36,400
	LOW	36,100	35,000	37,800	29,400	31,600	32,000	26,900
Senior buyer	HIGH	44,600	43,900	40,400	36,000	38,200	37,000	39,200
	LOW	29,000	28,700	30,000	26,700	28,800	25,000	28,000
Buyer	HIGH	35,000	29,000	29,400	29,000	27,700	29,000	36,000
	LOW	22,900	21,000	23,200	19,700	20,600	18,900	24,000
Junior buyer	HIGH	26,400	24,300	26,000	24,000	28,500	24,000	28,000
	LOW	19,700	17,100	19,500	18,200	22,000	13,100	20,000
Expediter	HIGH	24,000	27,600	29,100	21,800	23,800	24,900	26,600
	LOW	15,600	20,800	18,700	14,900	16,300	10,700	15,700
Trainee	HIGH	24,000	24,000	21,000	19,000	18,500	★	19,700
	LOW	15,000	18,000	16,700	14,600	15,000		15,000

Based on 2,041 positions surveyed nationwide

★ Probably insufficient data for realistic average. Sample return too small.

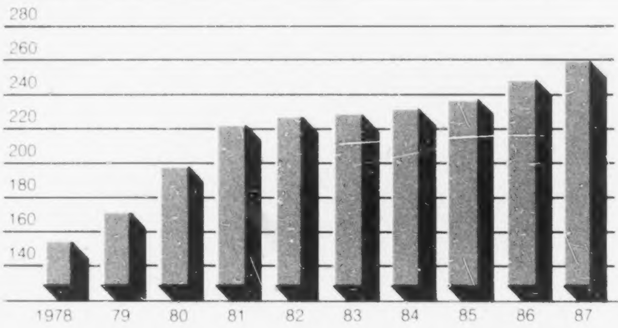
Electric, electronics equipment %	Communications, electric service %	Medical, pharmaceuticals, & related products %	Metal services centers %	Stone, clay, glass products %	Instruments & related products %	Fabricated metal products %	Machinery %	Transportation equipment %	Chemicals, allied products %	Printing & publishing %	Paper related products %	Composite: All industries %
8.1 6-7	6.3 5-7	7.4 6-8	6.1 6-7	6 7-8	5 6-7	5.5 7 +	7.4 5-7	5.8 6-8	5.9 6-8	7.4 7-9	6.9 6-8	6.7 6-8
5.7 6-8	6.1 6-8	7.0 6-8	6.0 6-8	6.2 7-9	4.0 6-7	6 7-9	7.8 5-7	6.6 6-8	5.3 6-8	7.2 7-9	★ ★	4.5 5-7
7.5 7-8	8.1 6-7	7 7 +	6.5 7-8	7.1 7-8	5.3 6-7	6.2 8-9	7.9 6-7	6.2 5-7	6.1 6-8	6.6 7-8	6.7 6-8	6.1 6-7
5.5 5-7	6.6 6-7	7.9 7-8	6.4 7-8	6.3 7-8	6.2 5-7	6.4 8-10	7.1 5-7	5.0 5-7	6.4 6-8	7.0 7-8	★ ★	6.9 6-8
8.4 6-8	6.7 6-7	8.0 6-7	6.6 7-8	6.9 7-8	5.7 5-7	6.7 8-10	7.7 5-7	6.1 6-7	6.6 6-8	7.5 7-8	7.1 6-8	6.9 6-8
8.0 6-8	6.6 6-7	7.9 7-8	6.6 7-8	6.3 7-8	5.5 4-6	6.9 6-8	7.4 6-8	5.4 5-7	6.5 6-8	6.5 6-8	★ ★	5.4 5-7
8.4 7-8	6.9 6-8	7.2 7-8	6.9 6-8	7.0 6-8	5.9 4-6	6.4 5-7	7.2 6-8	6.3 5-7	6.9 6-8	7.3 5-7	7.4 6-8	6.0 5-7
8.2 6-8	6.3 5-7	7.2 7-8	7.1 6-8	6.9 6-8	6.3 5-7	6.9 5-7	7.3 6-8	6.4 5-7	7.0 6-8	7.1 5-7	6.9 6-8	6.6 5-7
7.4 6-8	7.3 6-8	6.3 6-7	7.2 5-7	7.3 5-7	5.2 4-6	6.3 5-7	7.2 6-8	6.9 5-7	6.7 6-8	8.1 6-8	6.7 6-8	6.9 6-8
6.9 5-7	6.4 6-8	6.9 6-8	7.1 5-7	5.9 4-6	6.1 5-7	6.1 5-7	7.5 6-8	7.4 6-8	7.7 6-8	7.2 6-8	7.2 6-8	6.7 6-8
6.5 5-7	6.9 7-8	7.1 7-8	6.9 5-7	6.2 5-7	5.9 6-8	7.0 6-8	7.3 6-8	7.0 6-8	7.4 6-8	★ ★	7.5 6-8	6.9 6-8
7.4 6-8	6.3 8-10	6.5 7-8	5.4 4-6	6.9 5-7	6.3 5-7	6.3 6-8	6.9 6-8	7.4 6-8	6.2 5-7	★ ★	6.9 6-8	6.7 6-8

Medical, pharmaceuticals, & related products	Metal services centers	Stone, clay, glass products	Instruments & related products	Fabricated metal products	Machinery	Transportation equipment	Chemicals, allied products	Printing & publishing	Paper related products	Miscellaneous
118,900 72,000	100,000 68,000	125,000 73,800	92,000 65,000	100,000 51,900	92,000 48,000	102,600 59,700	136,000 72,000	112,700 78,600	110,000 7[illegible],700	87,600 62,700
151,500 ★ 90,000	109,800 70,100	132,000 90,000	125,000 83,000	96,700 74,000	97,000 56,000	121,000 72,100	★ 159,000 70,000	109,000 83,600	122,900 68,400	91,600 59,200
69,400 52,100	63,700 49,900	62,800 44,100	60,500 48,900	72,500 51,200	57,000 39,700	76,000 54,700	87,900 51,400	92,600 42,100	79,600 53,400	82,600 39,700
75,000 55,500	66,000 48,600	★ 52,000 48,000	★ 62,800 41,300	77,700 64,700	91,400 60,200	61,500 48,300	★ 84,100 54,200	★	83,400 49,700	71,600 43,000
51,300 36,700	48,000 34,200	60,500 44,600	59,400 39,200	50,500 38,500	62,800 41,300	61,700 40,400	60,000 40,100	58,000 33,900	62,500 44,200	64,000 31,000
★ 65,700 40,500	51,000 39,000	59,700 41,000	50,500 38,700	53,200 39,200	74,000 43,000	49,600 34,700	68,200 45,000	★	★	59,300 35,700
52,300 36,000	41,800 27,500	44,900 28,600	39,000 27,000	46,300 31,700	41,000 28,000	44,000 29,700	48,000 29,000	47,000 24,000	41,900 27,000	36,500 20,000
42,000 31,700	32,900 23,600	39,400 26,300	40,000 25,000	44,000 29,000	38,000 22,000	41,000 27,300	40,000 24,100	36,700 18,900	42,100 28,700	46,000 22,500
38,300 25,500	29,000 19,700	37,500 24,900	28,700 18,900	32,000 24,000	31,600 20,000	32,600 25,400	36,000 21,000	29,400 19,000	31,700 22,600	29,400 16,700
27,400 21,000	19,800 15,000	28,000 24,000	26,200 17,100	27,000 18,500	29,000 19,000	27,200 20,300	22,600 18,000	★	25,000 17,900	21,000 12,900
27,500 18,300	26,900 14,700	21,300 16,600	16,000 11,200	19,600 14,900	21,000 16,000	26,500 21,600	29,600 17,000	26,800 16,400	26,700 18,000	26,000 10,900
26,000 17,500	18,700 12,000	18,000 16,000	20,000 15,700	16,400 12,000	★	20,300 14,900	24,000 16,000	18,000 12,000	21,000 15,700	18,700 11,600

Slow going on the rate trail

PurchasingWorld freight rate index

(1972 = 100)



Increase over previous year	
1978	6.0%
1979	12.5%
1980	14.9%
1981	10.7%
1982	3.7%
1983	0.2%
1984	1.5%
1985	2.5%
1986	4.2%*
1987	4.8%*

*Estimated

This year's overall freight rate boosts are turning out to be well under earlier estimates, according to the latest quarterly report by Wharton Econometrics—prepared exclusively for ***Purchasing World***.

Right now the prediction is for an overall increase of only 2.5% for all of 1985. That's significantly under the 3.3% estimated six months ago and the 2.7% estimated three months ago. A year ago, talk was of a 6% boost for this year. So much for that.

These projections, incidentally, parallel closely a recent ***PW*** survey (November, 1985) which indicated a 2-3% increase for the current year.

More important, Wharton's forecast of increases for the next two years has been toned down measurably. The firm's current average estimate for 1986 is put at 4.2% compared to 4.4% three months ago.

Part of the improvement can undoubtedly be traced to the increasing ingenuity of freight buyers. Aided by deregulation and competitive infighting among carriers, they are increasingly turning to long-term contractual agreements and modal shifts in an effort to shave costs.

Another part of the less-than-expected rate hike story can be traced to fundamental changes in the economy. For one, energy (a key ingredient in transport) has moved up far less than expected.

Imports are also dampening transportation price increases. Here's how Wharton explains the import effect:

As the import share of goods rises, demand for shipping falls because imports are only hauled once or twice. Domestically made goods, on the other hand, are moved as raw material inputs between plants before they are ever hauled into the trade chain. The obvious implication is that higher imports tend to decrease demand for shipping and hence reduce price pressures.

And what is true for overall freight rates holds for each of the key modes. Projections for rail, truck, air, and barge are all moderate. Here is the specific outlook by mode:

- **Rail**: Traffic picked up considerably in 1984 and the volume of services rendered (in constant dollars) grew 6.7%. Prices, aided by this demand spurt, rose about the same amount.

This year, however, the pace of growth in both freight carried and prices is slowing. Rail price increases should be held to a moderate 2-4% annual rate in each quarter and 3.5% for the year as a whole. On an upbeat note: 1986 and 1987 rate hikes should average out near 4.2% and 4.6%, respectively.

- **Truck**: Demand has fallen behind its year-earlier pace. Overall 1985 rates should grow only slightly more than they did last year. Best bet: a very modest 2.5% advance.

But in 1986, haulers will try to regain the initiative and price boosts could accelerate to about 4.3%.

- **Air**: The value of air traffic services grew 4.5% in 1984 and prices jumped 5.5% as carriers tried to recoup their losses from the previous year. But advances should slow in 1985 as the pace of economic growth moderates, input costs hold steady, and tonnages fall behind the previous year's pace.

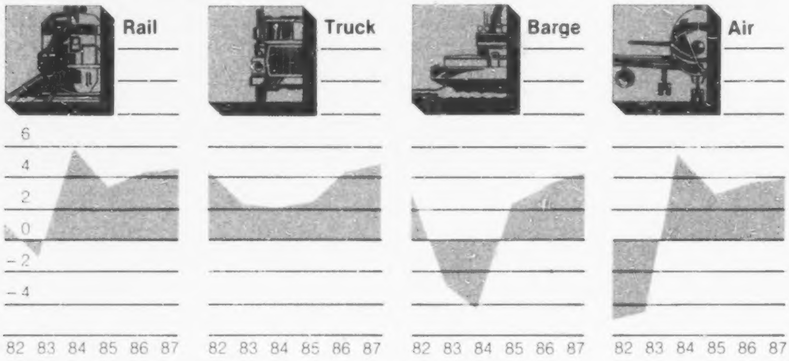
Only a 2.9% hike is expected for this year and the average increases in 1986 and 1987 are put at only 3.7% and 4.0%.

- **Barge**: Traffic has been slipping in recent years and the industry suffered a 4.3% average price decline last year. Continued overcapacity and cut-throat inter-industry competition should continue to squeeze demand growth rates this year.

Wharton's expectations are for only a 2.3% rate increase this year and a moderate 3.7% acceleration in 1986. **PW**

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasts

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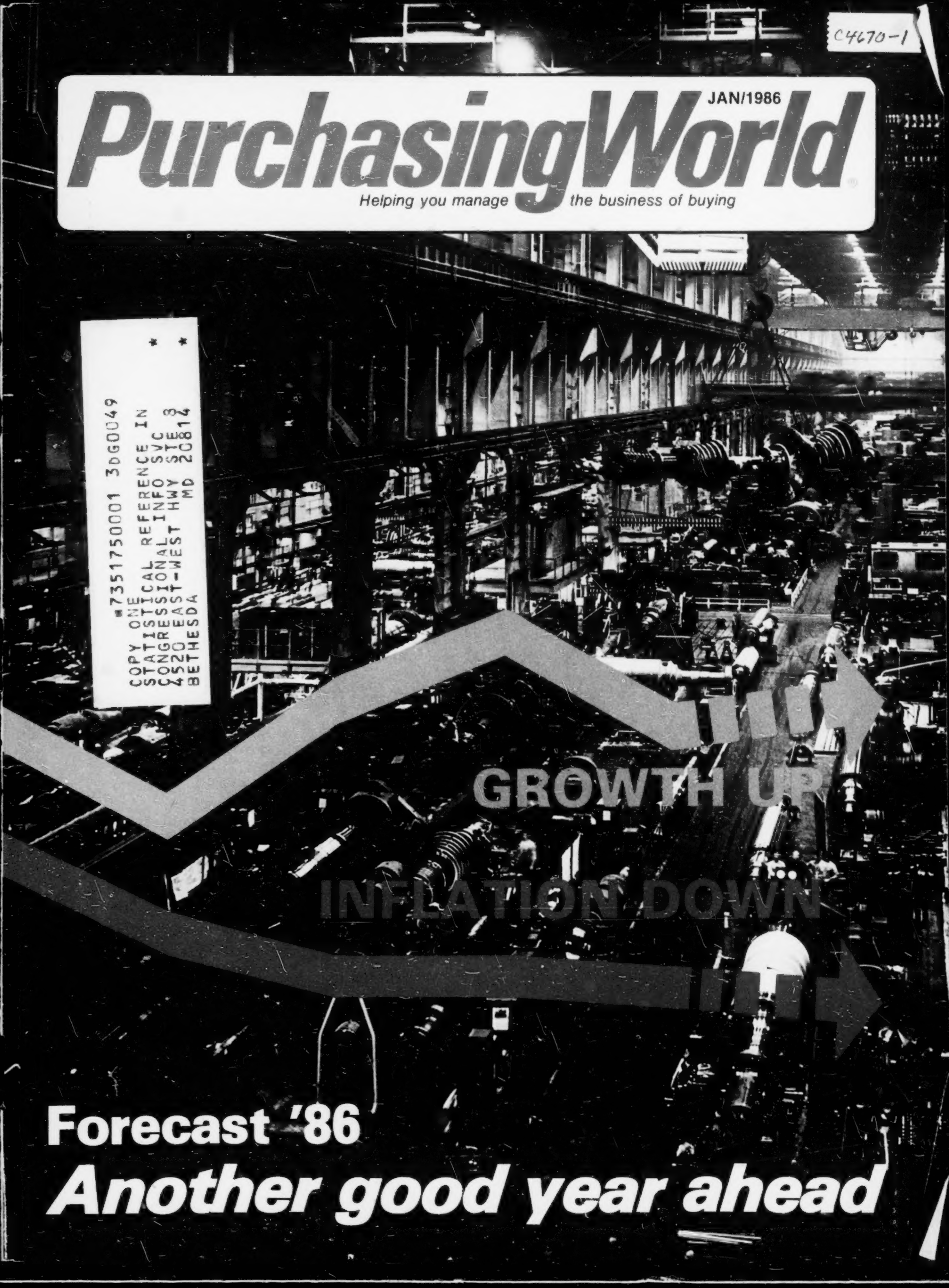


Forecast '86

Another good year ahead

PurchasingWorld

January 1986
Vol. 30 No. 1

Forecast '86: Count a modest cadence for 1986

Compiled by executive editor Robert Reichard

40 **Paradiso's prognosis: Economy is alive and well in year four**
Real GNP advance for 1986 will continue at the same pace as 1984, posting about a 2.6% increase for the year, says *PW*'s forecasting expert Dr. Louis J. Paradiso. Key signs of economic health point to steady momentum with a minimal amount of inflation.

42 **A chorus of optimists**
Top execs say they expect demand for their products to hold up a little better than in 1984—at 3.5%.

48 **Trade pendulum seen swinging back**
The worst of the trade imbalance may be over for the U.S. thanks to the decline in the dollar, says Dr. Nariman Behravesh, vice president of Wharton Econometrics, in this exclusive *PW* interview.

52 **Buyers still playing it close to the vest**
The latest *PW* survey of buyer sentiment points to a good year for procurement. Buyers see few problems, some bargains, and only slight price hikes this year.

56 **Prices to tick up a tad**
A look down the road by Data Resources Inc. (DRI) predicts industrial prices rising at only a 1.5% rate in 1986 and 3% in 1987.

58 **Models take a close fix on '86**
Coming off a very accurate projection for 1985, the big four econometric models are again in close agreement this year.

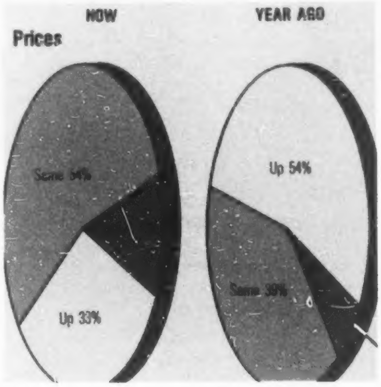
76 **NAPM says '86 will top '85**
The latest NAPM Business Survey Committee sees a little lift in business activity but there is concern that rising import prices and import quotas will restrict volume.

Feature

60 **Carrier communication a key to J-I-T a Buick City**
Working with its transportation carriers and industry groups, GM's Buick City has implemented a broad ranging communications' system to support the ultra-high service levels required for its innovative J-I-T programs.

SERVICE COST

74



76

Departments

4 PW Pointers
6 Editorial
11 PW Predicts
22 Datatrak
60 PW Transportation Report
64 Negotiations
70 Classified
72 Sample Pak
73 Safety Products
74 Ad Index

Cover photo courtesy of General Electric Co

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PW PREDICTS

Robert S. Reichard, executive editor

A rarity of agreement

It's a rare phenomenon when you can get any two economic experts to agree on a forecast. Rarer still is getting near unanimous agreement among several. But that's the situation this year with *PW*'s Forecast '86 experts on the price outlook. The consensus: 1986 will be another year of easy prices—with buyers, rather than sellers, calling the signals.

Expect some moderate and scattered price advances in the year ahead, but they will be nothing like you would expect for a business recovery moving into its fourth year.

What makes this forecast consensus even more impressive is that it comes from diverse sources—buyers, sellers, business analysts, and econometric models.

On the purchasing front, for example, buyers responding to a new nationwide ***PurchasingWorld*** survey put the average increase in their 1986 procurement costs at 2.8%.

This prognosis is also verified by the NAPM Business Survey Committee. Some two out of three members hope to either hold the price line or effect scattered price declines over the next six months. 97% say any price increases will be moderate.

Suppliers—generally a more bullish lot—tell much the same story. They see an average 1986 advance for their products of only 2.7%—close to *PW* readers' estimate of 2.8%.

Even the top economists are of the same mind. Wharton Econometric's Dr. Nariman Behravesh sees the aggregate producer price index rising by less than 3%. And *PW*'s veteran forecaster Dr. Louis J. Paradiso, looking at the finished producer price index (which includes food), is even more optimistic—seeing only a 0.5% increase.

The four econometric models regularly monitored by *PW* suggest only an average 2% rise in the finished goods producer price index over the next 12 months. And the more service-oriented GNP price deflator is expected to rise by only 3.5%—just a bit under the 3.7% figure posted in 1985.

Nor are these favorable econometric projections limited to the big macro yardsticks. DRI, presenting details for some 26 subgroups, forecasts 23 of them will end up with increases of 4% or less.

These sanguine predictions are all the more convincing because they are based on essentially the same reasoning. All sources, for example, cite the fact that there is more-than-ample capacity around.

The cost side of the price equation also promises restraint partially because of continuing pressure on raw materials and component parts prices.

Thus, (1) unit labor costs will remain under control (up perhaps only 2-3% this year), (2) energy tabs will continue to weaken as crude oil drops at least another $1/bbl later on in the year, and (3) borrowing costs should edge a bit lower.

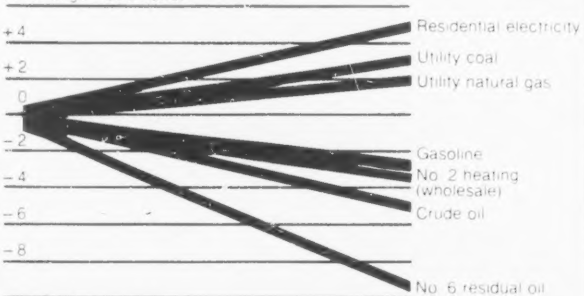
Energy Prices

Figure on another good year for energy costs—with some declines in the petroleum product sector offsetting small advances in natural gas, coal, and electricity.

If we assume only a $1/bbl decline in crude oil (and this is probably conservative considering OPEC's decision to slug it out in the marketplace) total energy costs should be up only 1.4% in 1986. Prior to the recent OPEC meeting, Department of Energy forecasts predicted the following changes in energy sectors:

- **Gasoline:** The average price for all grades is expected to fall to near $1.14/gal by late 1986—off about 4¢/gal from estimated fourth quarter 1985 levels. Consumption meantime could be off about 0.6%.
- **Heating oil:** Current winter tags will be 2¢/gal higher than a year ago because of low stocks. But subsequent price declines, reflecting softer crude tags, should bring the wholesale No. 2 grade down 3¢/gal.
- **Residual fuel oil:** Price weakness is compounded by declining consumption—expected to be off 4% in 1986 on top of 1985's 12% drop.
- **Natural gas:** About a 2% increase is expected over the next 12 months.
- **Coal:** Bolstered by reduced stocks, the industry could bring prices up 3% by late 1986
- **Electricity:** Slightly better than a 4% price boost is anticipated over the next 12 months—with late 1986 residential average increases put at 8.24¢/kwh.

Note: This scenario could change dramatically if some recent predictions by many energy analysts prove correct that the benchmark price for Saudi light crude could drop as low as $18/bbl *(See "Energy price drop would prod all sectors over projections" in the April, 1985 issue of* ***PurchasingWorld****)*.



Energy price trends

Source: Department of Energy

PW PREDICTS

Chemicals

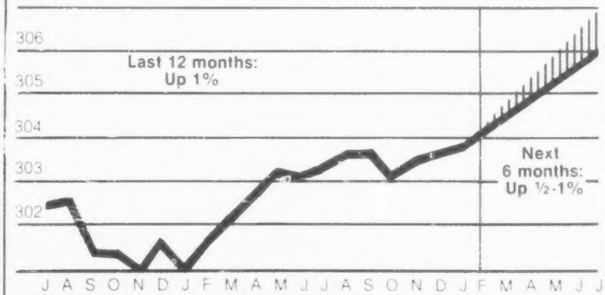
CURRENT SITUATION: Discount the spate of 1Q price hikes. That's the normal pattern for this time of year. If recent history is any measure, many of the boosts will either fail or be watered down. There's no doubt that it's a continued buyers' market. Despite modest demand gains, price averages advanced by only about 1%. **Overcapacity, weak petroleum feedstock costs, and import competition have put a lid on new advances.**

DEMAND: Look for about a 1-2% increase in chemical production in 1986—less than the expected GNP advance. That's below 1985's 3.5% increase and the 6.8% jump recorded in 1984. **But there could be significant differences among the many subgroups that make up this complex industry.** Best showings will be in synthetic materials (+6%) and drugs. Basic chemicals will show only a 1% advance.

SUPPLY: No probems are seen anywhere. Overcapacity is the rule in almost all sectors. The average U.S. chemical plant is operating at only 79% of capacity. And things are likely to stay that way as slow demand gains are offset by new capital investment advances (1% in 1986 and 7% in 1987). **Exacerbating the problem is all the new capacity coming on stream overseas—especially in Saudi Arabia where that nation's raw material position gives it the near-term capability of being the world's lowest cost producer.**

PRICE OUTLOOK: Increases should continue to be quite modest—with most quotes remaining well under official list levels. Look for about a 0.5-1% increase in overall transaction prices by midyear. The yearly average is up about 2%. Subgroup increases projected for 1986: industrial chemicals (1.5%), paint (1.5%), drugs (5%), ag chemicals (.5%), and plastic resins (2%). **Annual advances through 1995 should average out at 4%.**

Chemical prices
(Index 1967 = 100)



Aluminum

Competition is still keen. Alcoa is reportedly granting sharp 15-30% discounts to nail down Boeing's alloy sheet business for 1986 and 1987. But there are a few bullish signs too. Free World consumption remains in the plus column—up about 1.5% over the year just ended. An even larger 2-4% gain is anticipated for 1986. Free World stocks also continue to fall, causing a modest turnaround in market ingot where prices are up 2-3¢/lb from this year's recent mid-year lows. And they could well break past the 50¢/lb barrier by early spring if current demand and supply trends continue.

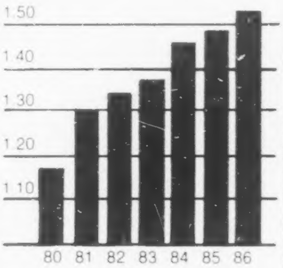
Polyethylene

Higher quotes are noted on both low-density (LDPE) and linear low-density (LLDPE) types—with prices averaging about 3¢/lb above late summer-early fall levels. Volume purchases of LDPE now go for 31-33¢/lb and LLDPE fetches 29-30¢/lb. High density polyethylene (HDPE) is also up about 3-4¢/lb—bringing the injection molding and blow molding grades up to 27-30¢/lb and 32-35¢/lb.

Magnesium

Expect to pay about 3% more as producers boost the basic ingot price by 5¢/lb to $1.53/lb. Cost pressures are blamed for the increase. But that should be it for quite a while as 1) Amex undercuts Dow in the die casting alloy sector (asking only $1.29/lb), and 2) Free-World stocks rise to 43,000 tonnes—the highest level in two years.

Magnesium
(Ingot prices $/lb.)



ABS plastic resins

Southeast Asian imports (from Taiwan and Korea) are causing some easiness. Softness is particularly prevalent in the west where overseas pipe grade material has gone for as low as 55¢/lb. Domestic grade pipe material, in turn, has also weakened a bit. Sales have been made in the 62-67¢/lb range—off about 3-5¢/lb from previous levels and considerably under the official 72¢/lb. Domestic operating rates also remain low—and could even drop to 65% in 1986 as new capacity comes on stream.

Copper

The red metal continues to drift. End-of-December quotes are still well under the year's 71¢/lb high. Lackluster demand is behind much of the softness as worldwide consump-

PW PREDICTS

Steel

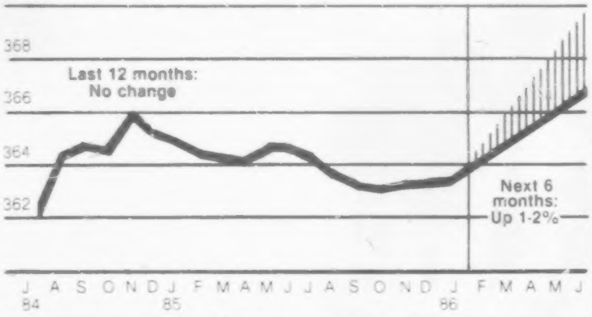
CURRENT SITUATION: Price boosts scheduled for this month are still up in the air. Mills want to restore the 10% or so that has been shaved off average steel prices this year—but the time may not be right. Hikes this big seem very high in light of recent flat demand. **Near-term shipment outlook isn't bullish and continuing import competition is still causing problems.**

DEMAND: 1986 domestic shipments will probably fall short of last year's 73 million-ton total. Don't count on more than 70 million tons for 1986. Reasons: declining auto needs and no real gains in other steel-using industries like machinery, construction, and oil and gas drilling. This could drop consumption to a few million tons under 1985's 95-96 million ton level. **Lower end use could also mean lower inventories.**

SUPPLY: Current low operating rates are expected to remain unchanged. Moreover, the industry's 1986 and 1987 capital spending plans suggest that domestic production potential will be static over the next few years. **Hefty imports are still a problem as the quota system fails to bring market share down.** 1985 foreign market share was at 24%. Reasons are obvious: lax enforcement, partial coverage of products and countries, and overly-eager attempts by foreign mills to circumvent the programs.

PRICE OUTLOOK: Some increases are likely—but not as much as suggested by recent reports—as both distributors and buyers begin to balk. **Best bet: only about a 3-5% increase in overall transaction prices by midyear.** Much of this will be in the form of discounts so official government yardsticks will be up less than that. **The price picture for 1986 depends on demand and on the exchange rate.** If the dollar continues to soften, it could make steel more expensive, giving domestic mills more leeway to nudge tags up further.

Steel Mill product prices
(Index 1967 = 100)



tion drops around 3-5% under 1984 levels. While a fractional gain is possible for 1986, it won't be nearly enough to push prices much above 70¢/lb. A similar pattern is projected for the longer term. U.S. mines will have to abandon about 35% of their current capacity—and settle for production rates of only about one million tons per year.

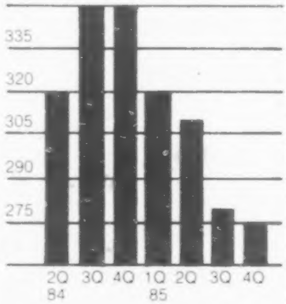
Machine tools

Prices may be ready to move up a bit. Blame it on the sinking dollar which has prompted at least one large Japanese supplier to raise its U.S. prices by about 10%. This firming trend is already showing up in machinery import prices where tags moved up 4% over the latest three-month period. All this could make for selective hikes in some domestically-made lines—both because of narrowing U.S. foreign price differentials and because offshore component parts entering these machines will cost more.

Linerboard

Prices remain extremely competitive—in recent months some transactions have been as low as $250/ton. But some turnaround seems likely before too long as 1) a weakening dollar has its impact, 2) temporary plant shutdowns reduce the supply overhang, and 3) demand shows some modest gains. Best bet: A move back into the $260/ton range by early spring. But any bounceback to the $350/ton peaks of 1984 seems unlikely given current forecasts for only a 92% average 1986 rate in this key paperboard sector.

Kraft Linerboard
(Transaction prices $/ton)



Benzene

The sharp fall-off in prices seems to be almost over. In fact, the near-term trend suggests considerable firming. First quarter 1986 contract prices, for example, will probably settle at around $1.25/gal (up 11¢ from recent lows). And in all likelihood, prices will climb to near $1.30/gal by early spring. Reasons: 1) supplies have tightened up recently, and 2) most of the chemical building block is now in the strong hands of contract sellers.

Metal castings

Imports are up significantly. The Cast Metals Federation puts the incoming shipments in seven key categories at double 1980 levels. That association also adds that import prices in these sectors are as much as 50% under comparable domestic

Business equipment

Soft prices for business equipment are likely to persist through the coming year.

Compare new Computer and Business Equipment Manufacturers Association (CBEMA) forecasts of sales dollars and number of units and the following unit price declines emerge: Microcomputers (off 9.2%); text-processing work stations (off 9.4%); electronic typewriters (off 3.4%); and office copiers (off 1.6%).

It should be emphasized that these numbers represent unit values (dollars divided by units), rather than prices, and can be distorted by changes in product mix. But, generally, they tend to support recent reports of a continuing downtrend in office product quotes.

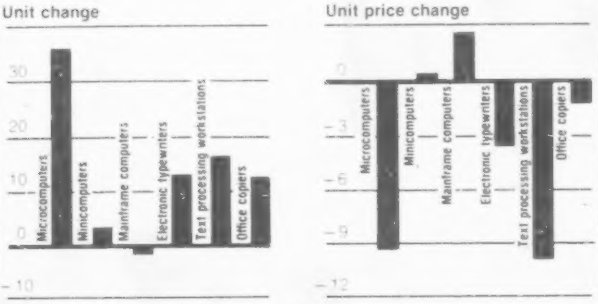
Other key findings of the just-released study for 1986:

- **Volume trends:** Declining prices will be more than offset by unit gains. A hefty 31% increase in microcomputers is anticipated, followed by text-processing work stations, electronic typewriters, and office copiers where unit gains of 18%, 13%, and 12%, respectively, are expected.
- **Dollar sales trends:** Comparable advances here, taking both unit volume and prices into consideration, are as follows: microcomputers (18.5%), minicomputers (3.7%), mainframe computers (1.6%), electronic typewriters (8.7%), text processing work stations (6.2%), and office copiers (10.6%). CBEMA's estimate of additional sales are 2.8% for telecommunications equipment and 2.9% for manifold business forms.

CBEMA forecasts overall dollar gain for all the above sectors at 5%. That's fairly close to an 8% estimate just released by Henderson Ventures, a consulting firm that also monitors U.S. computer and office equipment markets.

The 1986 Business equipment outlook

(Percent)



Source: Computer and Business Equipment Manufacturers Assn.

products. But this could all change as the group presses for these big tariff increases: iron construction castings (40%), cast iron water main pressure pipe fittings (40%), steel valve castings (50%), cast iron compressor housings (50%), brake drums and rotors (35%), bronze ship propellers (50%), cast steel truck and machinery components (30-50%).

Semiconductors

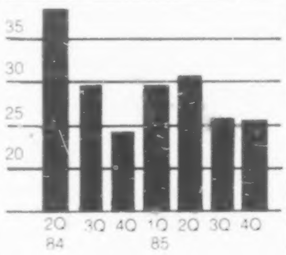
The big bargains of the past year may be a bit harder to come by in 1986—on a combination of expected demand gains and new hikes in Japanese prices. On the demand front, the World Semiconductor Trade Statistics program committee predicts a 35% increase in 1986 U.S. sales—followed by subsequent increases of 26% and 22% in 1987 and 1988. The Japanese have just announced plans to increase prices on all types of semiconductors by about 20% to reflect the recent depreciation of the dollar. But fear of being charged with "dumping" may also have played a role in their decision to raise prices.

Polyvinyl chloride

Prices are weakening again as pipe grade resins now fetch only about 25-26¢/lb (down a bit from early fall levels and a hefty 7.5¢/lb under quotes prevailing as recently as last April). On the other hand, some seasonal pickup is anticipated by spring. But these gains are likely to be quite modest because operating rates are not likely to go much above the 80% mark in 1986.

Polyvinyl chloride

pipe grade
(Transaction prices ¢/lb)



Zinc

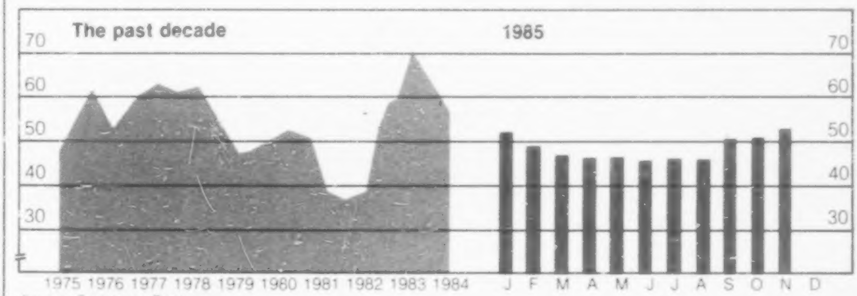
Prices continue to hover in the low 30s because of overproduction and fractional global consumption gains. But modest firming is expected by the second quarter—as recent production cutbacks begin to have some impact. There also is very little excess material around—despite current softness. But the long-run prognosis can hardly be called bullish. Plans to open new mines—plus excess capacity—will limit any price recovery, with the metal hard pressed to average out at much above 35¢/lb over the next 6-12 months.

Don't miss PW's special report on software in the February issue

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Don't throw away your optimists' badge

The new year is starting out with pretty good expectations for the overall economic picture.

No one really expects any big near-term gains. But the leading indicators that signal basic business trends a few months ahead are now solidly in the plus column.

The NAPM Business Barometer—at 53.3—is significantly ahead of what it was in mid-1985. It is now at the highest level since July 1984 (see chart).

And the Department of Commerce index is about the same. Although gains have been small, the basic barometer has been in an upward trend for six consecutive months.

A closer look at some of the key sectors of the economy also supports a thesis of continued growth.

Also, look at hard goods. The stock-sales ratio is now at the lowest level in two years (see chart). This means that factories will have to raise output in the months immediately ahead to meet expected increases in final demand.

Even the capital goods sector is looking better. Even though machine tool orders are well under year-ago levels, they have perked up slightly over the last month or two (see chart). Machine tool builders say inquiries from automotive and aerospace industries have increased recently.

There are also some reports that Japanese producers, hit with a falling dollar, will raise prices. If they do, it could be a stimulus to hard-pressed American firms.

That isn't to say that the equipment industry doesn't face problems. Expectation of a decline in capital spending this year is certainly cause for concern. So are uncertainties about tax reform. Fewer tax breaks might dampen future capital spending.

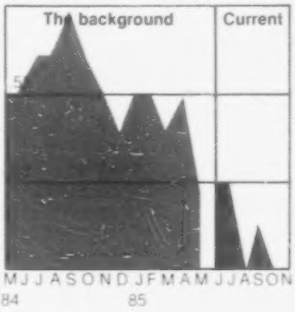
But consumers remain optimistic. A new survey by the Michigan Research Center, for example, again puts its Index of Consumer Sentiment above the 90 level (1966 = 100). That's the tenth consecutive quarter it has been in the 90's, the longest period in more than 15 years in which consumer optimism has remained at such a high level.

But consumer savings rates—well under traditional levels—could remain low for a while yet as (1) financial incentives for new auto purchases give a big push to sales and (2) a strong stock market provides many buyers with increased liquid asset values.

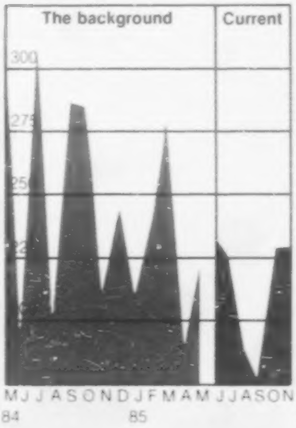
The high consumer debt doesn't seem to present any immediate problems either. A recent study by the Federal Reserve Board reveals that almost half the installment credit outstanding is owed by households in the highest income quintile—those most able to service this debt.

Leading indicators

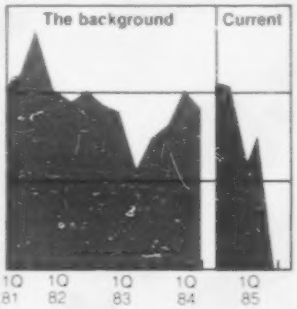
1. Inventory/Sales ratio
(Durable purchased material)



2. Machine tool orders
(Millions of dollars)



3. Savings ratio
(Percent)



Even housing is expected to hold up because of the modest drop in interest rates. Econometric models forecast the prime rate will average out at 9% in 1986. If correct, this could help push mortgage rates down even more.

Don't ignore the falling dollar—particularly in the medium-term rather than over the next few months. Prices of foreign goods are already beginning to rise following last year's 15% decline in the dollar. Sooner or later this will put a lid on imports.

Some rise on the horizon

The first tangible effects of dollar devaluation are beginning to show up.

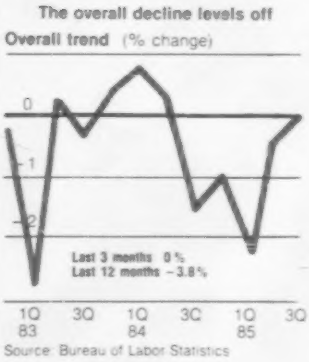
Note from the chart that import prices are no longer falling. Although a lot more is needed to redress the trade imbalance, the dollar-inspired bottoming out of import prices does represent a sharp reversal from the previous 12 months.

Albeit there are still plenty of import bargains, but the gap between domestic and foreign quotes is probably as wide as it is going to get.

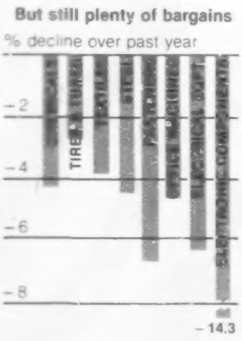
A look at some of the individual import sectors confirms the mixed price trend.

- **Crude materials:** Over the past three months prices for rubber were off 9.8% and pulp and waste paper were down 4.5%. Over the past decade, both of these product lines have fallen 20%.
- **Fuels:** Prices have dropped for the sixth consecutive quarter and are now nearly 8% under year-ago levels. Crude oil accounts for the biggest share of decline.
- **Chemicals:** Averages over the past quarter dropped 0.4%—led by declines in fertilizers and inorganic chemical elements. The overall decline for the entire year is estimated at 4.3%.
- **Intermediate products:** These products present a mixed picture. Although steel, textiles, and rubber manufactures suffered small declines, increases were posted over the last few months for nonmetallic mineral manufactures, wood manufacturing, paper products, and metal manufactures.

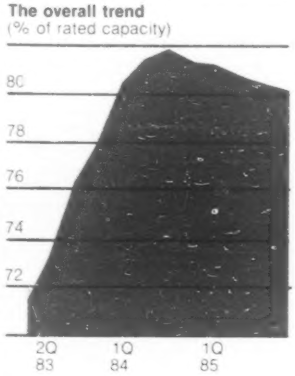
Import price trends



Source: Bureau of Labor Statistics



Factory Operating Rates Drift Lower



Current industry performance
(% of rated capacity)

Stone, clay, glass	80.9
Steel	68.2
Nonferrous	81.5
Fabric-metal products	80.5
Nonelectrical machinery	75.0
Electrical machinery	71.0
Automotive	80.6
Aerospace	87.4
Instruments	81.8
Textile products	85.2
Paper & products	92.3
Chemicals & products	78.8
Petroleum products	87.0
Rubber & plastic products	87.3

Source: Federal Reserve Board

- **Machinery and transport:** The trend here is upward. Overall 3-month advances are estimated at nearly 1%. Moving higher were general industry machinery (3.6%), specialized machinery (4.5%), and metalworking machinery (4.1%).

Why isn't the gap narrowing?

Things on the supply side seem to be getting easier rather than tighter.

The nation's most widely monitored measure of supply pressures, the factory operating rate, has been edging down for more than a year (see chart).

In most postwar recoveries, the operating rate has tended to rise steeply in the latter stages of recovery. Credit this current unusual condition to two factors: (1) the relatively slow rise in industrial production (up only 3% in the past 18 months) and (2) the increasing reliance on imports as an alternative source of goods.

Whatever the reasons, it is clear there is a big gap between the current level and the 85% operating rate level that has traditionally marked the dividing line between buyers' and sellers' markets. And, with industrial production slated to rise only 1-2% in 1986 (about matching the expected increase in new capacity), the overall factory utilization rate is likely to stay near current levels.

What's true of the aggregate operating rate also holds for most of the subgroups that make it up. Steel, for example, isn't likely to move much above its current upper-60s level anytime soon.

And machinery sectors aren't likely to move from their 70-75% range either if current projections calling for a leveling off in capital spending prove anywhere near true.

About the only major subgroup now (and it is likely to remain so) in the 90s range is paper.

In fact, every major industry is now, and should continue to be operating well under preferred levels. This should guarantee continuation of supply excesses and competitive infighting that was characteristic of this past year.

CURRENT PRICES

Staying on the money

The year has ended about where it began—with only fractional increases in industrial price averages. Preliminary indications suggest that this key inflation yardstick rose by less than 0.5% over the past twelve months.

Even this doesn't tell the whole story. Many product lines actually dropped over the year, including corrugated cartons (-6.5%), fuel oil (-21.8%), paper supplies (-3.1%), rubber belts and belting (-3.1%), synthetic fibers (-4.5%), and plastic resins (-2.9%).

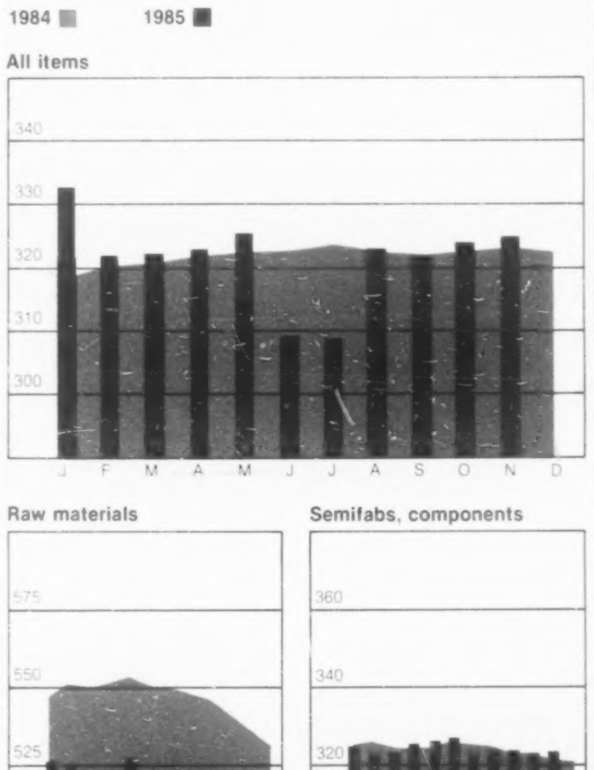
And in energy, both gasoline and home heating oil rose, but this was offset by declines in coal, jet fuel, and residual oil (with the latter off 4% over the lat-

This month's breakdown

	Latest level (Nov.)	% change from: Month ago	% change from: Year ago
Bearings	354.3	−0.2	2.8
Bolts, nuts, etc	276.2	0.1	−0.3
Chemicals, inorganic	299.3	−0.3	−1.1
Chemicals, organic	350.8	−1.0	−0.3
Concrete products	324.0	0.2	3.9
Corrugated cartons	264.1	−0.3	−6.5
Cutting tools, small	287.0	0.0	1.1
Electric lamps (bulbs)	347.8	−0.1	2.9
Electronic components	197.8	0.1	0.4
Fans and blowers	359.7	0.0	2.3
Foundry and forge products	263.8	−0.1	0.2
Fuel oil (residual)	885.7	−4.2	−21.8
Furniture, commercial	311.3	0.0	3.5
Gasoline	568.2	2.6	0.9
Glass, flat	229.1	0.3	4.9
Glass containers	387.1	0.0	6.3
Gypsum products	349.5	2.9	4.5
Hand tools	376.9	0.1	3.5
Hand tools, power driven	234.7	0.0	3.8
Industrial furnaces	392.2	0.8	3.3
Integrating and measuring instruments	233.0	0.0	1.0
Internal combustion engines	346.8	0.0	2.6
Lubricating oil	N/A	N/A	N/A
Lumber millwork	312.2	−0.1	0.9
Material handling equipment	294.6	0.1	1.1
Metal containers	358.3	0.2	0.3
Metal mill shapes (nonferrous)	306.5	−0.4	−3.7
Metal tanks	305.4	0.1	−0.3
Motors and generators	351.1	−0.2	2.6
Motor trucks	312.6	0.1	7.5
Office and store equipment	154.1	−0.1	0.2
Paperboard	264.2	−0.6	−10.2
Paper boxes and shipping containers	266.0	−0.6	−2.9
Paper office supplies	236.0	−0.3	−3.1
Paint	277.2	−0.1	0.0
Plastic resins	299.9	−0.2	−2.9
Precision measuring tools	262.4	0.0	2.9
Pumps and compressors	359.5	0.3	1.8
Refractories	372.2	0.0	1.8
Rubber belts and belting	336.3	−1.8	−3.1
Scales and balances	228.9	0.0	−0.7
Steel products	363.0	−0.1	−0.6
Switchgear	281.4	1.0	0.9
Textiles, synthetic fibers	150.4	0.2	−4.5
Textiles, gray fabrics	151.1	0.2	−1.7
Tires and tubes	236.4	0.1	−0.8
Transformers and power regulators	231.9	0.2	1.0
Welding equipment	295.8	1.5	1.7
Wire and cable	205.2	0.0	2.0

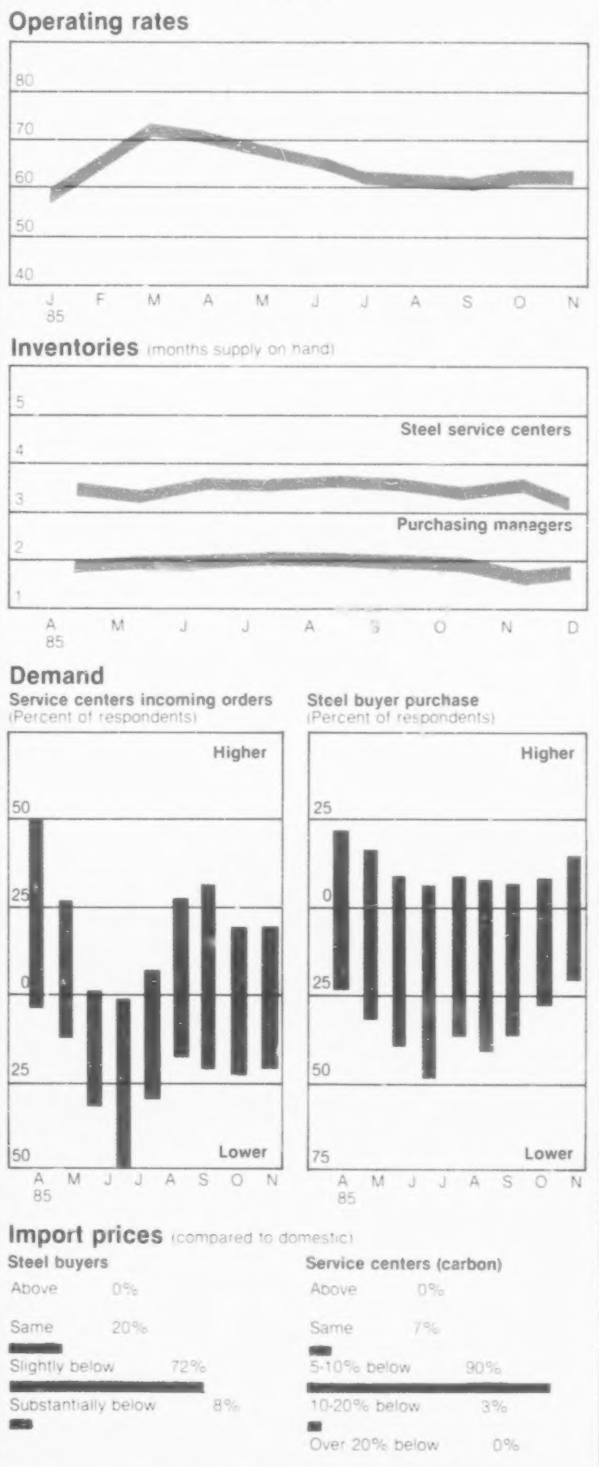
Industrial prices

(Index 1967 = 100)



Source: Bureau of Labor Statistics

Steel



Source: Steel Service Center Institute. NAPM Steel Buyers Committee

est 30-day period. Moreover, new declines in crude oil suggest more general weakness ahead.

Chemicals don't look as if they're about to move either. Latest figures show continuing declines in organic chemicals, inorganic chemicals, inedible fats and oils, and paint materials. Although some first quarter boosts have been announced, continued market imbalances indicate that many of them will not take.

A mixed picture also shapes up in construction materials as declines in lumber and plywood offset hikes in gypsum products, sand, and gravel.

Capital goods aren't going anywhere either. True, there were recent increases in the textile, mining, and chemical machinery sectors as well as in industrial furnaces. But these were minor, with overall capital goods tags moving up only 0.1%.

Finally, if there is any doubt about the overall price trend, take a look at the table alongside where close to one out of three products regularly monitored by *PW* moved lower over the past month.

STEEL SCENE

It's better than awful

Some modest near-term improvement in steel demand may be in the making.

Although the prognosis for the year is still not very exciting, there could be a temporary upward blip over the next few months. That's what a new distributor and steel buyer survey seems to say.

Some 22% of the members of the Steel Service Center Institute (SSCI) now see increases in orders over the next three months as opposed to 19% who anticipate further deterioration.

Cautious optimism is also reflected in new predictions by Andrew Sharkey, SSCI president, who now feels his group can sustain last year's shipment level of 21-21.5 million tons. But even he cautions against expecting any new gains.

But, as suggested above, first quarter buyer demand doesn't look all that bad. The 16% of PMs queried in the survey who say they expect to increase their receipts of steel over the next few months is the highest percentage recorded in two years.

On the other hand, this figure should be weighed against the 20% who still contemplate declines.

Inventory policies also seem to discourage any big demand gains. Despite significant drops in service center days' supply and maintenance of low levels by buyers, the feeling is that still more can be squeezed out.

On the service center side, for example, some 39% of the responding distributors currently contemplate inventory cutbacks over the next three months—more than double the 15% who feel some increases may be in order. This gap has narrowed from last month's reading of 61% for cutbacks and only 8% for increases.

Buyers seem to be following suit with stocks. Again, expected parers outnumber expected accumulators and the gap between these two is also narrowing.

As in previous months, much of the inventory restraint can be traced to faster deliveries and the absence of any fear of shortages. Virtually everybody expects a problem-free early 1986 though there are some scattered mentions of possible difficulties.

Also, imports are expected to swell the amount of steel available. Few, for instance, feel that quotas will seriously cut down on import shipments.

On this point, Sharkey puts the import penetration level at around 22.5-23% for 1986—far higher than the administration had hoped for.

Continued reliance on imports is also suggested by service center responses to a question on dependence on foreign steel over the upcoming months. The 13% seeing increased dependency is the highest such reading in nearly two years and it offsets the 13% who will be cutting.

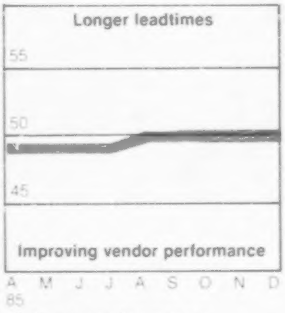
Once again, this is confirmed by buyers. Specifically, 16% now anticipate greater dependence—this pretty much offsets the 20% who see a decreasing role for steel imports.

One thing for sure, there is still a considerable price advantage in foreign steel. Some 93% of service centers say imported carbon steel is cheaper and 3% say the advantage is in the 11-20% range.

Monthly procurement status report

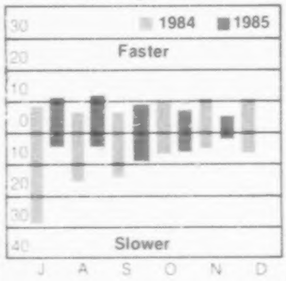
Leadtime index

A "diffusion" index based on 158 key commodities. Avove "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.

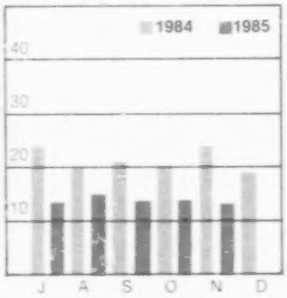


Delivery performance

(Percent reporting deliveries)

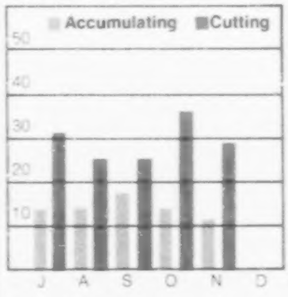


Forward commitments



Inventory strategy

(Percent of respondents)



Source: NAPM

PROCUREMENT STATUS

Staying glued

Early 1986 isn't going to be much different from either 1984 or 1985 when it comes to procurement. That's how buyers queried in *PW*'s latest procurement status survey see things. Their message in a nutshell: Buyers' markets are here to stay.

There is plenty of evidence to back up this conclusion. Leadtimes, for example, continue to hold steady despite the fact that industrial activity has moved up over the past few months. It is also reassuring that *PW*'s exclusive leadtime index remains stuck on the neutral "50" mark—indicating that any stretchouts are being offset by shrinking leads in other areas.

Vendor deliveries also continue to speed up. Of the buyers surveyed, 6% reported faster deliveries compared to only 2% who noted some slowdowns.

Buyers, looking at ready availability, continue to squeeze inventories. Not only are more buyers still paring (29%) than adding (12%), but forward commitments remain at extremely low levels—with only 13% buying 90 days or more in advance for production materials.

Prices continue easy, too. New NAPM survey findings tell the story—13% of buyers reporting price declines over the latest month, far outweighs the 2% who report increases.

The reasons for these favorable readings are readily apparent. While industrial activity has moved up, so has new capacity. So operating rates remain around 80%—well under the preferred level—and not one major procurement item is in short supply.

Also, there's the heavy import flow adding to the overall supply. The dollar decline could inhibit future gains. But there is a long lead time between the change in the value of the dollar and a change in import volume. Chances of any appreciable effect on trade totals before mid-1986 are slim.

Leadtimes and availability

Chicago: Hardware is in and is now a stock item. Also posting shrinking leadtimes (in weeks): Printed circuit boards (6-12), ICs (16-26) chlorine (½) and PVC resins (2). Specialty sheet and tube are in and stock sheet is out. Coated paper is out (to 6).

Cleveland: Mixed picture here. Moving out are maintenance paint (2-3), and plastic packaging (3-4). Coming in are hardwood lumber (1-2), softwood lumber (1-3), skids (1-3), plastic shrink film (on demand), and coil coating paint and polyethylene (2).

Los Angeles: Status quo here with these typical weekly leads: aluminum tubing (6-8), grey iron castings (8-10), brass castings (4-6), electromechanical devices (6-8), pumps (10-12), stainless coil (12-14), and std. fasteners (4).

BUSINESS DATATRAK

Houston: Not much change here but stretchouts on capital items are possible by spring. Typical weekly leads. Corrugated cartons (2), component parts (1-8), galvanized coils (10), and stainless fasteners (8-10).

Philadelphia: Modest shrinkage with these lower weekly waits: Std. fasteners (stock to 3), std. valves (3-4), PC boards (4-8), aluminum products (4-6), std. stainless rod (to 3), and plastic sheet (2-3).

Pittsburgh: Typical prevailing delays (in weeks): Paper bags (4-6), plastic bags (3-4), corrugated and folding boxes (3-4), wirebound boxes (4-5), drums (1), lumber (3-4), painted seals (6-8), steel strapping (2-3), paint (4-5), and alloying metals (2).

Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	25.10
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	29.25	29.25	29.25
Steel, plates, Pitts., cwt	23.25	23.25	23.25
Steel, plates, H.R., Pitts., cwt	23.25	23.25	23.25
Steel, sheets, C.R., Detroit, cwt	27.85	27.85	27.10
Steel, strip, C.R., Chi., cwt	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.468	0.445	0.538
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb	5.35	5.35	5.20
Brass, red, 85%, [sheet], lb	1.31	1.30	1.25
Brass, yellow, [sheet], lb	1.26	1.25	1.20
Cadmium, ton lots, lb	1.00	1.00	1.25
Copper, electrolytic, wire bars, refd., lb	0.68	0.67	0.63
Copper sheet, over 24 in., lb	1.40	1.39	1.37
Lead, common, N.Y., lb	0.188	0.190	0.230
Magnesium, pig ingot, [99.8%], lb	1.53	1.48	1.48
Mercury, 20 fl. lots, N.Y., fl	297.00	315.00	323.00
Molybdenum, oxide, dealer lb	2.60	2.65	3.05
Nickel, cathode, dealer lb	1.88	1.90	2.22
Platinum, dealer, oz	346.00	328.00	327.00
Silver, N.Y., oz	6.05	6.03	6.87
Tin, Straights, N.Y., lb	N.A.	N.A.	6.02
Zinc, Prime West, East St. Louis, lb	0.33	0.36	0.45
Zinc, die casting alloy, No. 3, lb	0.415	0.425	0.515
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.19	16.13	16.25
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	495.00	495.00	495.00
Wrapping paper, std. distributor cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd	0.215	0.240	0.400
Cotton drill, 1.85, 59", 68x49, N.Y., yd	1.040	1.045	1.040
Cotton middling, 1", N.Y., lb	0.560	0.568	0.603
Printcloth, 48", 80x80, N.Y., spot, yd	0.72	0.68	0.78
Army duck, 37", 13 oz., yd	1.56	1.30	1.78
Blended printcloth, 64", 78x54, yd	0.800	0.850	0.700
20s combed yarns	1.95	1.95	2.12
Wool tops, N.Y., lb	3.60	3.60	3.60

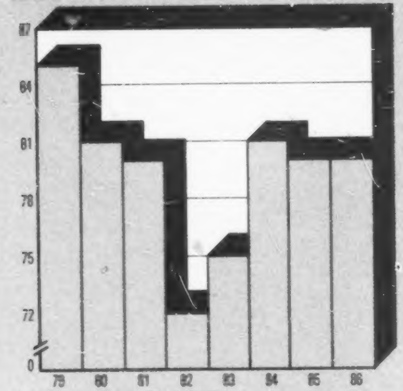
	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb	0.455	0.455	0.455
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal	1.20	1.14	1.15
Caustic soda, 76% solid, drums, carlots, cwt	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb	0.58	0.58	0.58
Formaldehyde, USP, 37% [12% to 15% meth.], tanks, lb	0.106	0.106	0.106
Glycerine, synthetic, tanks, lb	0.91	0.91	0.81
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.52	0.52	0.54
Naphthalene, crude, tanks, lb	0.22	0.22	0.22
Phthalic anhydride, tanks, lb	0.270	0.270	0.305
Polyethylene resin, low density liner film grade (market price), lb	0.310	0.280	0.290
Polypropylene, homopolymer grade (market price), lb	0.350	0.350	0.380
Polystyrene, general purpose grade (market price) lb	0.350	0.350	0.370
Polyvinyl chloride, pipe grade (market price), lb	.250	.260	.260
Soda ash, 58%, light carlots, cwt	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb	0.26	0.26	0.35
Sulphur, crude, ex-terminal, Tampa, Fla., lt	157.50	157.50	162.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb	0.69	0.69	0.69
Xylene tanks, gal	1.36	1.36	1.26
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	308.70	319.65	308.95
Lumber, 2x2, pine, mbf, cl	294.05	298.00	286.15
Plywood, plyform, ¾", msf, cl	578.85	582.30	573.05
Plywood, ½", msf, cl	367.75	381.80	379.15
Cement, bulk, ton, tl	64.98	64.73	63.74
Sand, ton, cl	6.41	6.36	6.23
Ready-mix concrete, 3,000 psi/cu.yd., 15 cu. yd.	48.12	48.00	47.62
Crushed stone, 1½", ton, cl	7.86	7.80	7.47
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.82	0.82	0.79
Gypsum sheathing, ½"x1"x8", msf, tl	212.99	212.44	206.40
Brick, common, per thousand, tl	184.61	184.53	177.23
Asphalt paving, AC-20	176.14	175.86	172.14
Concrete sewer pipe, 12", prem. joint per foot, cl	7.14	7.14	7.13
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl	21.25	20.00	26.25
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	28.75	27.75	30.75
Gasoline, 91 oct., reg. Los Angeles, rack, gal	0.770	0.750	0.760
Gasoline, 94 oct., reg., Chi., tank car, gal	0.798	0.813	0.723
Heating oil, No. 2, Chi., [illegible], gal	0.868	0.860	0.795
Heating oil, No. 2, N.Y., bulk, gal	0.858	0.878	0.808
Heavy fuel, PS 400, Los Angeles, rack, bbl	26.50	26.50	26.50
Jet kerosene, gal	0.760	0.853	0.768
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.345	0.345	0.425
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	69.00	69.00	81.00
Steel, No. 1, hvy., dlvd., Chi., ton	68.00	68.00	75.00
Copper, No. 1, East, wholesale buy, dlvd., lb	0.565	0.550	0.545
Copper, No. 2, East, wholesale buy	0.495	0.470	0.455
Brass, red, East, wholesale buy, dlvd., lb	0.525	0.510	0.505
Brass, yellow, East, wholesale buy, dlvd., lb	0.290	0.330	0.345
Alum., old sheet/cast, E., wholesale buy, dlvd., lb	0.285	0.295	0.335
Alum., mixed clip., E., wholesale buy, dlvd., lb	0.310	0.320	0.355
Zinc, old, East, wholesale buy, dlvd., lb	0.110	0.110	0.200
Lead, clean solids, East, wholesale buy, dlvd., lb	0.100	0.100	0.120
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	9.00	9.00	15.00
Paper, old corrug. box, dlr., N.Y., ton	7.00	7.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb	0.085	0.090	0.120
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb	0.15	0.16	0.35

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Supply availability: No sweat

Factory operating rates

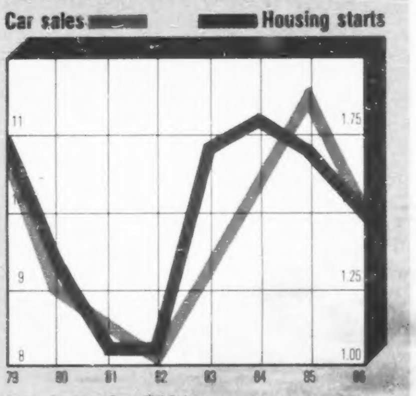
(Percent)



Source: Federal Reserve Board, PW Estimates

Big ticket consumer demand: A leveling off

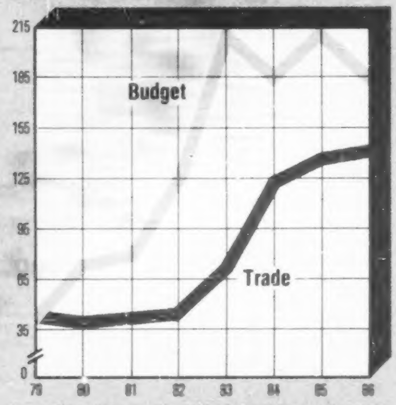
(Millions of units)



Source: Commerce Dept., PW Estimates

Deficits: As big as ever

(Billions of dollars)



Source: Office of Management and the Budget, Commerce Dept., PW Estimates

Housing

The drop in mortgage rates from the highs of 15-16% of a few years ago to the 12-13% range is providing some impetus to housing starts which have held in the relatively high 1.7 million units range in 1985—fractionally under 1984's 1.8 million units.

There has been some dropoff in recent months from the 1.9 million units high of last spring and summer. This slowdown should continue in 1986 with only about 1.5 million units anticipated.

Main reasons for this are high consumer debt and uncertainty about the future. And while mortgage rates have come down, the trend to higher home prices has offset some of the "mortgage" effect.

Consumer spending

One of the big problems here is that personal consumption expenditures have been growing faster than after-tax income. This past year, for example, expenditures rose 3.9% while income went up less than 2%. The result is that the saving rate has dropped from a normal 6.1% in 1984 to only 4% in 1985.

This, of course, will not continue. A bounceback to a 5% savings rate can be anticipated in 1986 as consumers begin to pay off previously committed debt. In turn, this should limit the increase in personal consumption expenditures to only 3% in real terms in 1986.

This will clearly affect autos where recent purchases have siphoned off some of the 1986 potential. The estimated 11.5 million unit sales of 1985 should drop to about 9.5-10 million units in 1986. And imports could be an added problem with foreign car makers expected to take about 2.5-3.0 million of the total unit sales.

Budget deficit

The federal government's shortfall should remain in the $175-200 billion range in 1986. And this is an election year so chances of tax hikes are negligible. Revenue increases from existing taxes will also be limited as economic gains remain modest and profits drop a bit.

Trade deficit

The trade imbalance has been a significant factor in slowing down our economy over the last year or two. It's only recently that the deficit has shot up—reaching $123 billion in 1984—as a strong dollar priced many U.S. sellers out of international markets.

Over the past year, the deficit has continued to rise—hitting $135 billion. And next year it could be even higher—in the neighborhood of $140 billion.

The big question is: When and how much will a weakening dollar help? As of now, the weakening (15% off 1985 highs) has not been enough to make a noticeable difference. Historically, it has taken about a year for a change to have any dramatic effect on import flows.

Actually, we would need another 15% or so dollar erosion to make any meaningful dent in the trade deficit. Given other U.S. and foreign financial priorities, such a further decline does not seem to be in the cards—certainly not over the next few quarters. ***PW***

A chorus of optimists

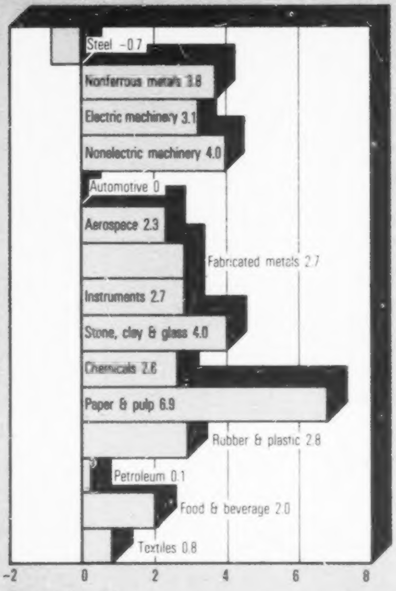
The nation's top corporate executives are counting on a fairly good year in 1986—nothing sensational, mind you—but good enough to assure continued demand gains in most industries.

Top managers expect demand for their own firms' products to be up about 3.5%. That's better than 1984 when estimated real sales advanced only 3%.

A more cautious attitude exists on near-term pricing moves. These execs see prices on their products rising an average of 2.7%. A year ago, when asked about 1985, they projected increases of about 4%.

But this good news, culled from

Price hikes will be quite modest
(Percent change '86/'85)



Source: McGraw-Hill

McGraw-Hill's latest capital goods survey, is offset somewhat by what appears to be a lull in plant and equipment spending. When corrected for inflation, capital investment totals could be off 3-5% as excess capacity and corporate profit squeezes make many firms think twice about expansion or modernization.

This could prove to be understated. A McGraw-Hill spokesman said he feels it is possible that the picture could start to look better to company managers if the dollar and interest rates keep heading lower. He adds that "spending plans could pick up over the next 12 months."

Also a positive sign for the long term: Preliminary figures for 1987 are unchanged from 1986. Historically, figures projected this far out have tended to be low—reflecting long-term investment uncertainties on the part of some of the survey respondents.

The new study also reveals that this time around there will be quite a significant amount of industry-by-industry variation in demand, price, and capital investment. Aerospace and instrument firms, for example, are looking forward to 10-11% real gains in demand. The steel industry sees a sizable 6.7% advance

But look for fractional demand losses in a few areas—notably in paper, petroleum, and non-electric machinery. The latter seems to support other survey findings calling for a pause in capital spending.

Price projections are also all over the lot. The best performance—at least from a buyer's viewpoint—should be steel (where fractional 0.7% price decline is projected for 1986). If true, it suggests that the industry doesn't have too much faith in the price increases scheduled to

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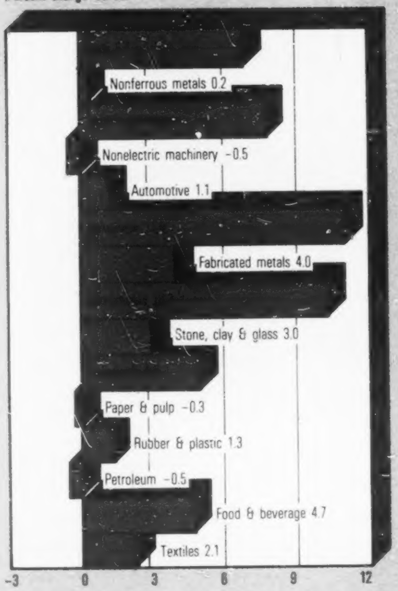
Other favorable price patterns are projected for the automotive and petroleum industries (both unchanged), textiles (up less than 1%), and chemicals (up just 2.6%). Food and beverages, with only a 2% anticipated rise for 1986, won't fare that badly either.

Some really ambitious price boosting plans are anticipated for the paper industry where a 7% advance is seen. This could reflect the industry's hope to recoup some of its price reductions of the past year. But judging from some of the forecasts made by econometric models, the industry may have to settle for a lot less.

Another relatively high inflation rate is projected by the communications industry. The 1986 increase for this sector is put at just over 7%. But again this seems questionable in view of demand forecasts which actually call for a 1.5% decrease in sales.

Wide variation about overall averages also shows up in plant and equipment projections. In a few areas like paper and the plastics groups, nominal dollar gains of 10% or more are projected. But offsetting this are declines in capital spending for steel, textiles, non-electric machinery, and stone-clay-glass.

The steel decline, however, could prove temporary—a hefty 44% increase in capital spending is projected in 1987. If correct, it is a good sign that executives in this hard-pressed industry are not about to throw in the towel—and apparently are planning a major modernization program to stay competitive with their offshore counterparts. **PW**



Ditto real sales gains

(Percent change '86/'85)

Source: McGraw-Hill

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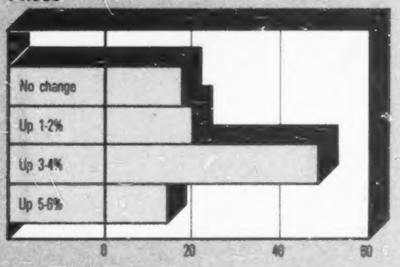
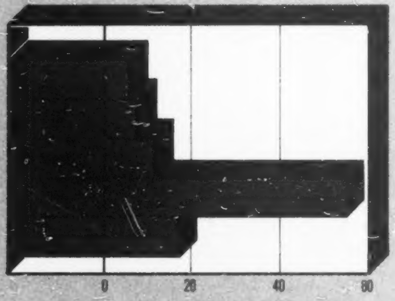
How PW readers view '86: Four views

(Percent of respondents)

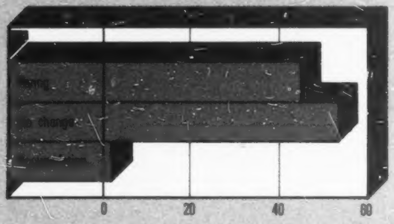
Prices



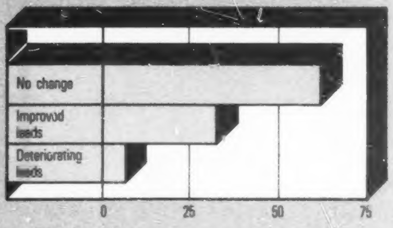
Demand



Inventories



Delivery performance



Source: PurchasingWorld

Buyers still playing it close to vest

PW's readers are looking forward to a fairly good 1986.

That's not to say they expect a return to the boom days of 1983. But they do see some good-sized gains for their companies. They also say that price increases will remain quite moderate—with no major procurement problems anticipated.

As one respondent to a new nationwide ***PurchasingWorld*** survey puts it, "There's very little evidence to suggest any major change in our operations. Orders are coming in at a fairly good clip and the prices we are negotiating look only a bit higher than in 1985."

In a nutshell, here's the scenario he and his fellow buyers are now painting for the next four quarters:

- **1986 price trends:** The average advance in company procurement costs is put at 2.8%. An overwhelming 86% of those buyers queried estimate that they will be able to hold their own specific increase to 4% or less. On the other hand, nearly three out of five say there could be some acceleration after mid-year.
- **1986 versus 1985 prices:** This year's price picture won't be as good as 1985. Specifically, nearly half of the respondents see increases running a bit higher than last year's. Only 20% said they might be able to hold hikes under 1985 levels.
- **1986 demand trends:** The majority of PMs (56%) feel that their own firm's activity will be up anywhere from 1-4%. And a modest 17% see even bigger gains. On the other hand, a few respondents see declines. The average projected increase is just under 2%.

This is pretty much in line with what the econometric models are projecting. An average of four leading models suggests little more than a 1.5% boost in industrial production in 1986.

PW readers also feel that GNP is likely to accelerate as the year progresses. 41% see larger gains for the second half compared to only 10% who see smaller gains.

- **Inventory plans:** "Close-to-the-vest" is still the order of the day. More than two out of five PMs queried plan to do some stock paring over the next few months, despite the fact that nearly 75% see their own firm's activity still on the rise.
- **Availability:** There won't be any big problems here. Many more respondents anticipate improved lead-times (32%) than stretchouts (7%), even though demand is expected to increase.

Only two respondents mentioned the possibility of shortages—and in one case it stemmed from fears of a steel strike which most labor analysts feel is only a remote possibility.

But the year won't be totally problem free. Some of the worries noted by readers: 1) elimination of competitive sources because of mergers or business failures, 2) the possibility of higher interest rates if the deficit stays near current peaks, and 3) the tendency for more and more standard items to become special order items.

A few readers also expressed concern over price increases—not only overall as the year wears on, but also in such specific sectors as structural steel and corrugated. The latter is traceable to the shift of some corrugated mills over to coarse and fine paper production.

Whatever the problems, most PMs have their 1986 purchasing strategies worked out. Quite a few are hoping to rely more on imports to help keep a lid on prices. An equally large number are concentrating on fewer sources and long-term commitments in return for price concessions or longer price protection in new contracts.

Other ploys to optimize purchasing effectiveness in the year ahead include 1) reduced inventories and just-in-time ordering, 2) pressing for shorter lead times, and 3) increased

...continued

emphasis on quality and service.

One midwestern purchasing executive sums it all up, "there's no reason why we can't continue to call most of the signals—what with today's more-than-ample supplies, import competition, quick delivery, and quality. Right now we are targeting for only a 1-2% increase in procurement costs—and there's an outside chance we might even do better than that." ***PW***

Prices to tick up a tad

Price outlook through 1987
(comparison of fourth quarter pricing)

Product	Percent change 85/84	86/85	87/86
Raw materials, energy			
Residual fuels	-18.3	-6.6	0
Industrial chemicals	1.6	1.1	4.0
Prepared paint	0.4	3.1	3.8
Supplies for manufacturing	1.8	3.8	4.3
Metals			
Steel mill products	-0.4	4.2	4.6
Foundry & forge shop products	0.6	4.2	4.6
Primary aluminum (ex extrusions)	-3.7	3.5	4.9
Nickel sheet	-0.1	2.2	8.1
Zinc die casting alloy	9.1	3.6	5.7
Copper & brass mill shapes	1.2	4.2	8.5
Components			
Explosives	-0.8	3.2	5.2
Pulp & paper products	-3.0	3.7	4.1
Motors & generators	3.2	5.6	5.9
Electronic parts	1.2	2.9	5.3
Relays	-1.8	3.1	4.7
Refractories	2.6	2.4	4.3
Construction Products			
Laminated plastic sheets	0.1	3.4	4.7
Concrete rebars	2.9	3.9	3.9
Heavy structural shapes	1.2	3.5	6.2
Plumbing fixtures	2.1	5.5	4.7
Asphalt roofing	1.0	1.5	2.5
Construction materials	3.5	7.9	6.5
Machinery			
Heating equipment	2.5	3.1	3.7
Metalworking machinery	1.9	4.3	4.3
General purpose machinery	2.2	3.0	4.8
Mining machinery	0.7	0.9	4.8

Count on very modest price increases for most industrial products—not only for 1986 but for the following year as well.

If new DRI projections hold true, the overall advance in 1987 will be only about 3%—not that much above the 1.5% gain anticipated during the next 12 months.

Factors behind this optimistic forecast include 1) no major changes in labor costs (private industry wage and salary increases will be only 4.1% in 1986 and 4.9% in 1987), 2) continued softness in the energy sector, and 3) relatively restrained demand gains. Industrial production will advance only 1.3% over the next four quarters.

With this in mind, here's a more specific rundown of DRI's price projections for key industrial sectors:

- **Crude oil:** Prices should decline at an average quarterly rate of 2.2% into early 1987 before an economic rebound leads to stronger energy demand and arrests the slide. But even then (during the last three quarters of 1987), the increases should be minimal—only 0.2% per quarter.
- **Natural gas:** Declines are likely here, too, because of softness in competing resid fuel oil and relatively flat demand. Best bet: Natural gas will drop at an average quarterly rate of 1.7% into early 1987. Beyond that (2Q through 4Q 1987) look for stabilization as crude oil prices bottom out.
- **Electricity:** Flat or declining costs for primary fuel inputs will still limit rate hikes. The cost of coal, the major raw material, will remain virtually flat through 1986—posting only a 0.3% average quarterly gain before it rebounds to 0.7% per quarter in 1987. Prices for electricity, accordingly, will advance at an average quarterly rate of 0.3-0.4% over the forecast period.
- **Industrial chemicals:** Declining hydrocarbon feedstock costs and slackening end-market demand in 1986 will combine to suppress increases. Thus the producer price index for industrial chemicals indicates an average quarterly escalation rate of 0.3% through 1986—and only a slightly more robust 0.7% over the following year.
- **Steel:** A modest drop in imports should help firm prices despite slow growth in overall consumption by steel-using industries. In 1986, the aggregate index for steel mill product prices should move up 3.1%. And in 1987, when stronger markets give more support to higher prices, the annual increase will be around 4.0%.
- **Nonferrous metals:** The current slump should continue for another two quarters on a combination of sluggish end-market demand and a worldwide capacity glut. All in all, average quarterly growth rates should climb only 0.4% into third quarter 1986. By 1987, however, increased consumption (especially in transportation) will spur moderate acceleration. The average quarterly increase for 1987 is estimated at nearly 1.6%.
- **Construction materials:** A 1986 fall-off in non-residential construction and weak energy prices counteract the impact of healthy residential building levels—thus keeping price hikes down. Gypsum products should increase by just 0.5% in 1986 and by 3.7% in 1987. Prices for insulation materials are forecasted to move up only 1.1% and 2.5% in 1986 and 1987.
- **Machinery:** Because price competition will remain necessary to survival, price increases will do little

aggregate price index for all machinery and equipment is expected to increase only 2.9% and 4.2% in 1986 and 1987.

- **Electronic components:** Prices should strengthen over the near term as slowing output rates combine with improved end-market activity to reduce current large inventories. The aggregate electronic components price index will show average annual increases of 3% because passive components will outpace active components by a wide margin.
- **Freight:** Only moderate cost pressures are projected for both air freight and interstate trucking—with no increase in air freight and only a 0.6% rise for trucking in 1986. But as oil prices stabilize in 1987, average quarterly escalation rates in air freight and trucking costs should accelerate to 0.6% and 0.9% respectively.

Models take a close fix on '86

The closeness in readings of the four leading econometric models—a point or less variance from the averages—is an encouraging sign of forecast consensus of where the economy is heading in the next year or so. This adds an extra note of confidence to these mathematically-oriented, computer-massaged predictions.

What they signal is also reassuring: modest growth without a recession in 1986. And 1987 looks even better as far as overall economic activity is concerned. Although there will be some price acceleration by 1987, it will be modest. Key price indices at that time should run up only about 4-4.5%.

Also reassuring is that 1986 forecasts are even more positive than those made a year ago for 1986 (*PW Jan. 1985).* Both GNP and production gains for the upcoming year are now a bit more robust. And projected rate hikes have been reduced anywhere from 1.5-2.0%.

Another reassuring note is that these four models were pretty much on the button for 1985. As long ago as January 1985, they were calling for a 3.0% GNP gain—very close to the latest government estimate of 2.4%. Similarly, the earlier GNP price deflator estimate for the year just ended was 4.3%—not all that different from the latest reading of 3.7%.

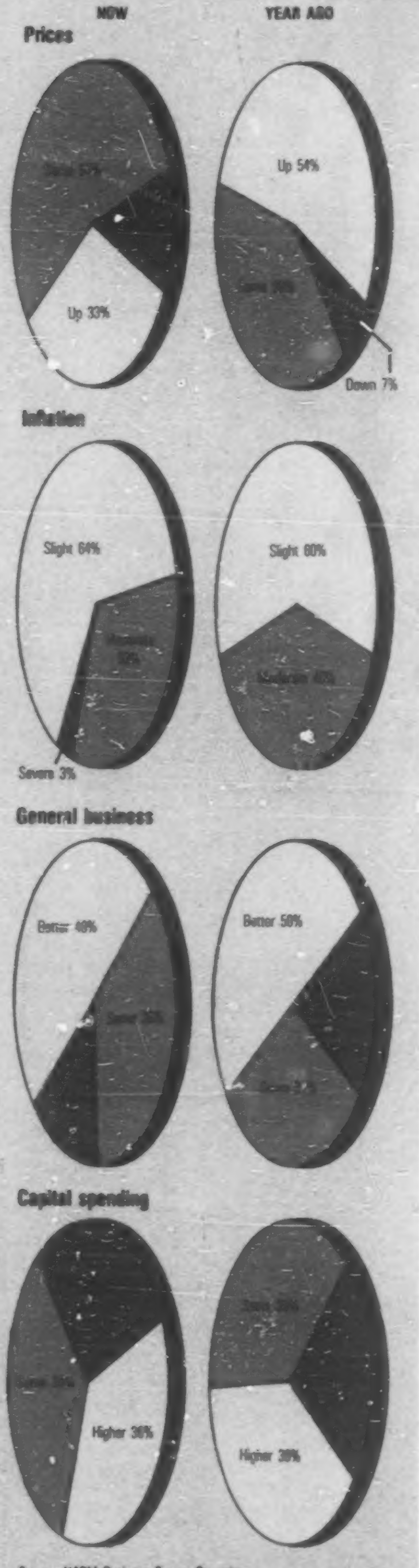
A closer look at 1986 and 1987 forecasts shows the following:

- **Growth:** The 1% average acceleration in real GNP from 1986 to 1987—from 2.5% to 3.4%—indicates clearly that things will be getting better as the months wear on. Also a sizable 4.4% jump in industrial production anticipated for 1987 indicates there is still quite a bit of life in the manufacturing sector.
- **Prices:** While there could be fractional deceleration in the 1986 price deflator—from 3.7% in 1985 to 3.5% in 1986—finished producer prices could accelerate from just under 1% last year to just over 2% in 1986. And only modest acceleration—4.5% in the GNP price deflator and 4.0% in the finished producer price index—is seen for 1987.
- **Interest rates:** Relatively slow GNP growth should hold the prime rate down near 9% in 1986. But slowly intensifying demand and price pressures envisioned for the following year (1987) could force it up about 1-1.5%.
- **Unemployment:** Things won't get worse. And they won't get much better either because demand growth envisioned over the forecast period will be offset by increases in the labor force and fractional productivity gains—thereby holding the jobless rate right around the 7% mark. ***PW***

What the big econometric models predict

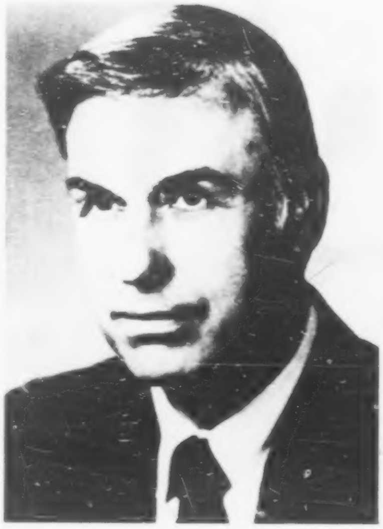
Real GNP (% change)	1986	1987
DRI	2.1	3.8
Chase	2.5	3.1
Wharton	2.4	3.8
Merrill Lynch	3.0	3.0
AVERAGE	2.5	3.4
Industrial production (% change)		
DRI	1.3	5.6
Chase	1.3	4.7
Wharton	1.6	3.9
Merrill Lynch	2.9	3.4
AVERAGE	1.8	4.4
GNP price deflator (% change)		
DRI	3.2	4.0
Chase	4.1	4.4
Wharton	3.4	4.3
Merrill Lynch	3.4	5.1
AVERAGE	3.5	4.5
Finished producer prices (% change)		
DRI	1.8	3.2
Chase	2.4	3.3
Wharton	2.0	5.1
Merrill Lynch	2.1	4.3
AVERAGE	2.1	4.0
Consumer prices (% change)		
DRI	3.3	4.0
Chase	3.9	4.5
Wharton	3.3	4.1
Merrill Lynch	3.4	4.8
AVERAGE	3.5	4.4
Prime interest rate (%)		
DRI	9.0	10.0
Chase	9.3	9.9
Wharton	9.1	10.5
Merrill Lynch	9.3	11.0
AVERAGE	9.2	10.4
Unemployment rate (%)		
DRI	7.5	7.4
Chase	7.0	6.5
Wharton	7.3	6.8
Merrill Lynch	7.1	6.8
AVERAGE	7.2	6.9

1986: The NAPM View



Source: NAPM Business Survey Committee

NAPM says '86 will top '85



Robert J. Bretz C.P.M.,
Chairman, NAPM Business Survey Committee and
Direct of Purchasing and Distribution, Pitney Bowes, Inc.

NAPM's Business Survey Committee is guardedly optimistic about the economy in 1986.

Although the group's 250 reporting members do not see any substantial advances in the quarters ahead, the majority feel the year will be better than 1985—with little inflation.

Robert J. Bretz, committee chairman and director of purchasing and distribution at Pitney Bowes, sums up the view of most of the PMs who were queried for the the survey: "Looking at all the replies suggests that we can probably look forward to about a 3% real growth rate over the year—with industrial procurement prices likely to rise by only 2%."

He hastens to add, however, that purchasing executives have some concerns. They are a bit worried about rising prices on some imports if (1) the dollar continues to deteriorate and (2) new import quotas restrict volume.

A few capital goods companies are also keeping a weather eye on proposed tax law changes, fearing that any tightening up of investment incentives could adversely affect the demand for machinery and equipment.

These uncertainties are probably why some 60% of the survey respondents say they are concerned about the next 12 months—a figure that has been rising steadily from 27% in May 1984 to 56% last spring.

Despite these worries the feeling is that we will remain in the plus column through all of 1986—with specifics shaping up along these lines:

- **Prices:** No real concern here. Two out of three surveyed PMs expect unchanged or lower prices over the next six months. That's better than a year ago when only 46% saw prices unchanged for 1985.

Moreover, 13% of these PMs are predicting lower prices in 1986. That figure has only been exceeded twice before in the history of the NAPM business survey—in May 1982 and December 1974—when we were in the depths of a recession.

Also encouraging is that three out of five purchasing executives expect price increases to be small.

- **Real growth:** Those predicting an increase for all of 1986 (49% of the respondents) outnumbered those seeing a decline (15%) by better than 3:1. But there is a hint of some deceleration after mid-year. Only 37% put the second half of 1986 above the first half.
- **Capital spending:** Only a moderate increase is suggested. The 36% who see increases here in 1986 are offset by the 30% who see declines and the remaining 34% who anticipate no change. The fact that a hefty 73% of the surveyed firms report operating rates under 90% (the same as last year) could be a factor behind this cautious approach. **PW**

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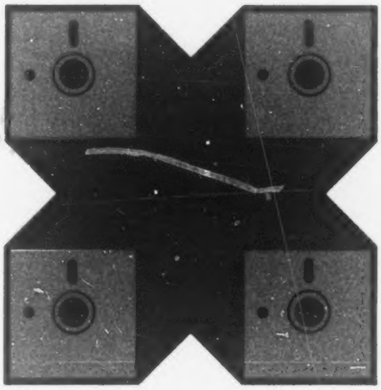
Special report: Software

27 **Computer preparation for negotiations**
Get "one up" on your negotiating opponent with *The Art of Negotiating*—a software package developed by Roy Nierenberg. *PW* reviews this new package and finds that it does a lot more than you can do with books, paper, and pencil.

28 **Software for distribution/inventory management**
Here's a rundown of some of the latest packages for inventory control, warehousing, and distribution operations.

29 **More software packages for purchasing**
A description of six more software packages for purchasing that can help keep the purchasing department up-to-speed.



27

Features

23 **N.A.P.M. is reaching out to touch someone**
There's a lot going on at the National Association of Purchasing Management. Some ambitious goals have been established, under the leadership of N.A.P.M. president Paul Moffat, as part of a five-year strategic plan emphasizing education, research, and membership development.

24 **Disposable respirators—to buy or not to buy?**
Deciding what type of personal respirator program to use in your company can be a frustrating experience for the buyer. Here's some advice from 3M Company to help sort out some of the confusion.

40 **No big wrinkles in packaging**
Across the board things in packaging are shaping up pretty well for 1986. Not to worry. The few increases expected in some lines are either offset by some expected dips or aren't really significant enough to make a big difference.

24

Departments

4 **PW Pointers**
6 **Editorial**
8 **PW Predicts**
33 **Business Datatrak**
37 **Classified**
37 **Ad Index**
42 **Transportation**

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PW PREDICTS

Robert S. Reichard, executive editor

A good act to follow

The new year is starting where 1985 left off. Some price increases have been announced for the first quarter, but that's standard for this time of year. Judging from preliminary reports, many of the increases are not sticking or are being watered down.

News from buyers is good too. The latest N.A.P.M. Business Survey Committee report still shows more PMs experiencing price declines (8% of respondents) than increases (2%). The study does find some signs that the pace of decreases is slowing, but that's not so surprising given the fact that general business activity is currently rising at almost a 3% annual rate.

The next few quarters probably won't show any dramatic changes. There will be scattered price increases ahead, but these will be modest—held down by continuing domestic competition, imports, and small cost increases.

This is certainly true of basic commodities. Right now it would take more than a year of solid growth to absorb current supply gluts on the primary level. And if oil prices tumble, it would have an affect on energy tags and a whole range of commodities that require large energy inputs. Both DRI and Wharton Econometrics estimate that if the price of oil dropped to near $20/bbl (from $26/bbl now) a full percentage point could be knocked off the nation's overall inflation rate.

Other reasons that basic commodity prices will remain soft: 1) continued all-out production by Third World countries hungry for foreign exchange, 2) additional substitution of synthetic materials for metals and other traditional commodities, and 3) less-than-sensational world economic growth.

The overall advance for the Western industrialized (OECD) nations is put at only 2.5% for 1986—down from the 4.9% and 2.8% rates of 1984 and 1985.

Also reassuring is the likelihood that the inflation rate will remain subdued. Labor cost pressures will be minimal as hourly wages of production workers are expected to rise only 3.6% this year.

All this has prompted the Administration to project only a 3.8% inflation rate (GNP basis) for 1986—virtually unchanged from last year's 3.5%. A recent survey of 28 leading economists suggests that the average advance for 1986 will be about 3.8%. Staying within that range, a survey of the 12 big econometric models pegs the rate at only 3.6%.

What is true for the U.S. is also true for the industrialized western world. OECD sees the inflation rate of its 24-member group averaging out at 4%.

In short, the price front seems stable for 1986. This trend may even continue into 1987.

Personal computers

Personal computers, now a standard fixture in most offices, are increasingly communicating with one another and with mainframes.

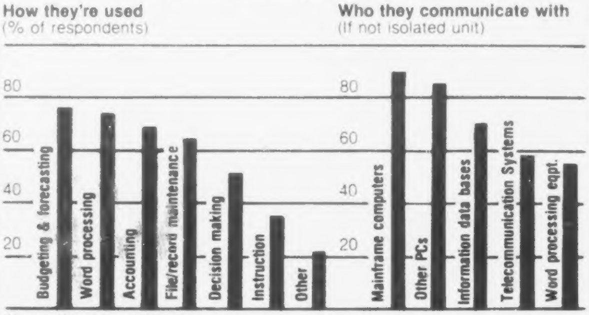
That's one of the key findings in a new Administrative Management Society (AMS) survey of 262 leading companies. Two thirds of the firms reported increased machine communication—up sharply from last year's less than 50% reading and a trend that bodes well for the integrated office concept.

Also indicative of increased efficiency is the fact that 96% of the respondents are using or are considering the use of PCs—up from last year's 92%. Almost a third also report having 21 or more PCs at their locations—a 10% increase over last year.

Other key trends noted in the study:

- **Users:** Middle managers have the most access to PCs (55% of respondents), closely followed by data processing personnel (54%), clerks (49%), and word processing personnel (48%).
- **Functions performed:** Budgeting and forecasting are the most popular applications, according to 76% of the respondents. Other high use applications: word processing (73%), accounting (69%), file/record maintenance (63%), and decision making (51%).
- **Type of equipment:** IBM continues to tighten its grip on the market—74% report using IBM PCs. Far behind are Apple (6%), Digital (5%), Wang (4%), and Hewlett-Packard (3%).
- **Acquisition approach:** Top management gives the final okay for PC purchases according to 73% of the respondents, followed by data processing managers (27%), individual department managers (19%), and administrative services managers (10%). Most respondents buy their PCs outright. Only 13% reported leasing them.

More significant for purchasing is the trend toward consolidation. Specifically, nearly three out of four respondents have instituted or are considering instituting a formal policy controlling the acquisition, installation, and use of PCs—up 11% from a year earlier.



Personal computer trends

Source Management World

PW PREDICTS

Plastic resins

CURRENT SITUATION: Prices have firmed a bit lately. Overall averages are up about 1% from recent lows. Producers are now trying to boost 1Q tags still more for key plastics such as high and low density polyethylene, polypropylene, polystyrene, and PVC. **A key reason for all this: fairly good demand.** Producer prices were up 6% in 1985. This, combined with only fractional increases in capacity, boosted the average operating rate for major thermoplastic resins to near 85%—up 5% over 1984.

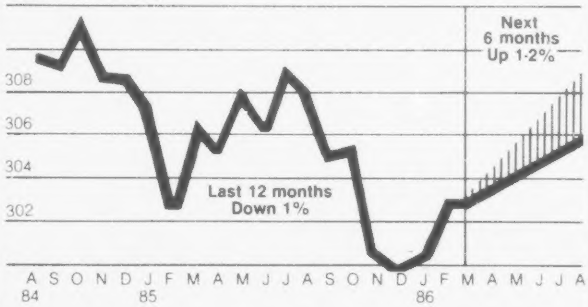
DEMAND: Look for another good year—demand is expected to increase 4-5%. LDPE will again lead the field with about 9.5 billion lb expected to clear the market—followed by PVC and HDPE (each about 6.5 billion lb), PP (5.5 billion lb), and polystyrene (4.2 billion lb). **The long-term prognosis is also bullish.** Average gains for volume thermoplastics may grow at about 5% a year. **Engineering plastics demand could increase 10-14% annually.**

SUPPLY: Glutted markets will slowly disappear. An 87% operating rate for thermoplastics is projected for 1986—up from last year's 85%. **But there could be significant variations among individual plastics.** Specific operating rates for 1986: HDPE (100%), LDPE (92%), PP (92%), PVC (81%), PS (70%), and ABS (68%).

PRICE OUTLOOK: Rising monomer costs and tolerably good demand should continue to put near-term upward pressure on prices. But advances will generally be modest because not all of the prices will stick and overall averages will only increase 1-2%. Quotes will all stay under official lists—**less than a 4% overall advance is projected for 1986.** Even this could be a bullish projection if crude oil takes a tumble.

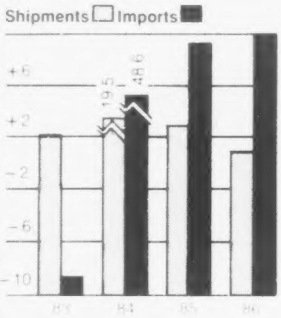
Plastic Resins

(Index 1967 = 100)



Bearings

(% change from year ago)



Bearings

Prices remain soft as imports take a larger bite out of the market. Some eye-opening figures on this score: Imports now account for 60% of U.S. ball bearing unit shipments and 17% of the dollar volume of all bearings currently sold. Three other signs suggesting continued downward pressure on prices: (1) new inroads by imports in the tapered roller and aircraft bearing sectors, (2) current low 60% domestic factory operating rates, and (3) projections for another 10% rise in the dollar volume of imports this year—to nearly $737 million.

Copper

Still no sign of any sustained price pickup. Producer metal is still unable to break through the 70¢/lb barrier. One problem is the relatively low demand from brass and wire mills. Nevertheless, some modest price advance is possible. Reason: Low user stocks and possible hedging against threatened work stoppages both here and in Canada. But don't expect any near-term return to the 80¢/lb levels of early 1984. The long-term prognosis isn't bullish either—as new capacity comes on stream and substitution takes its toll—particularly in the telecommunications sector where fiber optics are gradually replacing copper in more applications.

Polyester resins

Prices of unsaturated resins remain soft. Quotes are off by as much as 5% from last year's levels. Behind the easiness are declining raw material prices and lackluster demand (1985 total use dropped 1% or so behind year-earlier levels because of disappointing boat and construction materials). Capacity has increased by about 100 million lb (to 1.7 billion lb—well above the 1.2 billion lb currently clearing the market). Prices are likely to remain at current depressed levels of 48-52¢/lb for the general purpose boat grade and 46-50¢/lb for the general purpose shower stall grade.

Aluminum

The light metal has turned a little more buoyant. Merchant ingot, for example, has moved from the mid-40s of last fall to near the mid-50s. Several producers have boosted non-heat treated plate and sheet by about 10%. Other bullish signs: (1) slowly falling producer inventories, (2) improved order books, (3) expecta-

Construction Materials

CURRENT SITUATION: Buyers remain firmly in control—as excess capacity, weak energy tags, and imports keep a lid on prices. In 1985, overall quotes moved up only about 1%. And in some areas—notably glass, plastic construction products, and wire and cable—they actually declined. This is remarkable because it has occurred at a time of relatively good construction activity (overall dollar totals for 1985 were up 8%).

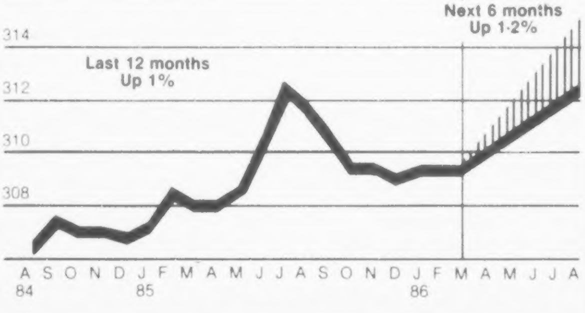
DEMAND: Domestic shipment gains will be limited in 1986, in part because of increasing imports. Construction activity probably will not top 1985 levels if nonresidential work declines as predicted. **Real U.S. gains for 1986 seem to be shaping up like this:** flat glass (2%), cement (2%), brick and tile (5%), concrete blocks (5%), gypsum (4%), and fabricated structural metal (2%). Lumber should hold flat.

SUPPLY: Adequate or more-than-adequate domestic capacity and continuing heavy imports assure a repeat of last year's problem-free performance. Canadians are capturing a bigger share of the market. They have doubled production potential in the past decade, and 1985 estimates indicate that they now control about 30% of the U.S. market. Steel contracts continue to be lured by cheaper overseas prices. And cement imports will probably hold on to their current 15-16% share of the market.

PRICE OUTLOOK: Lackluster demand and excess supply aggravated by imports, will hold overall advances to about 2-3%. Individual product lines will advance as follows: asphalt roofing (0-1%), glass (2-3%), insulation materials (1-2%), gypsum products (0-1%), structural steel shapes (3-4%), rebars (4-5%), and concrete products (5%). **Some acceleration is possible by 1987—but only into the 3-4% range.**

Construction Materials

(Index 1967 = 100)



tions of a modest increase in Free World consumption in 1986, (4) continuing shutdown of excess capacity, and (5) increased buying by the Japanese. Certainly, no one is predicting a boom, but the feeling is markets will continue to inch up—with ingot reaching 60¢/lb by sometime this spring or summer.

Silicon wafers

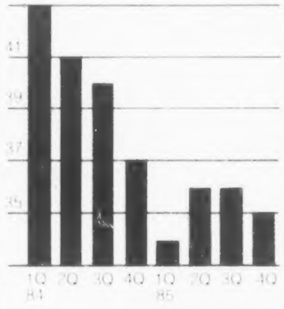
Price erosion should continue in 1986—on top of the 5-10% decreases recorded in 1985. Although demand could be up this year, it will only partially reverse last year's 50% drop. Not surprising, competition remains fierce—with 4-inch wafers selling in the $9.50-11.50 range, 5-inch wafers in the $18-21 range, and 6-inch wafers going for about $35. Spot market quotes are even lower—with 4-inch varieties going for as low as $9.

Polystyrene

New attempts to boost prices by a hefty 4¢/lb could be in trouble. Reason: Demand and pricing are historically weak this time of year. Another factor: low operating rates. The industry at latest report is producing at less than 70% of capacity. With only a 3-4% increase in shipments anticipated for 1986, the industry will be hard pressed to push this rate up by more than a percentage point or two anytime soon. Best bet is a 1-2¢/lb rise in prices. This would bring the general purpose grade up only into the 35-36¢/lb range. That's still 12-13¢/lb under official list levels.

Polystyrene prices

(Market quotes ¢/lb)



Paper

Price averages may be ready to move up a bit. Discounts have increased slightly in newsprint and groundwood coated papers, but these should be offset by the new $40/ton increases in uncoated white papers that would eliminate most of the discounting of recent months and by attempts to bring market prices for linerboard back into the $290/ton range. (They had been as low as $240-250/ton late in 1985). Chances are some of these latter increases will hold because supplies aren't nearly as loose as they were last year. Also 1986 demand for corrugated boxes (linerboard's end-use product) is likely to be up 2-2.5% in 1986, reversing last year's decline.

Lead

The heavy metal continues to sag. Quotes at latest re-

Flexible packaging

Big developments are in the offing in the dynamic flexible packaging market. A new study by Frost & Sullivan points to some key trends:

- **Overall demand:** The various product lines in this industry (films, laminates, paper, foil, and bags) already have about 15% of the overall packaging dollar and could capture an even bigger share by 1990 as they rack up 6.6% annual real gains.
- **Product breakdown:** Biggest advances over the 1984-90 period will be in converted flexible packaging where close to 9% real annual gains are anticipated. On the other hand, relatively small annual increases (about 3-4.5%) are seen for heavy duty bags, grocery/merchandise bags, and plain wrappers.
- **Converted flexible packaging details:** The major trend setter here will be the expansion of existing markets, aided by state-of-the-art cost-effective coextruded, multilayer barrier, flexible materials. One foot dragger is the retort pouch which is only gaining acceptance slowly.

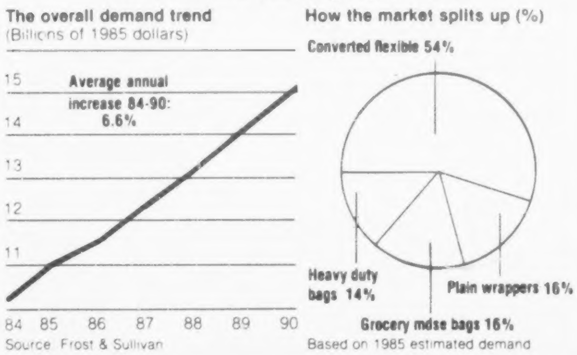
There's less optimism, however, about heavy-duty shipping sacks where demand may actually edge lower. One exception here: The all-plastic heavy-duty bag could more than triple in demand by 1990.

The gain in plastics will also be evident in other flexible packaging sectors, especially in the grocery sack area. Paper, which had a 9:1 advantage over plastic in 1984, will probably move to parity with plastic by 1990.

Further inroads for plastics are also expected in the merchandise and shopping bag arena. Their current 60% of market share here is expected to expand to near 70% by the end of this decade.

Looking at the last flexible packaging sector—plain wrappers—it's becoming clear that this is basically a mature market. But again some distinctions are in order. While static or declining trends are seen for tissue paper, glassines, and greaseproof papers, stretch pallet wrap could more than triple in size by 1990.

The flexible packaging market



Source: Frost & Sullivan

Based on 1985 estimated demand

port were still under 20¢/lb—pretty much unchanged from the levels of the past few months, and less than half the 50¢/lb quote that prevailed some five years ago, just before the last recession. Blame it on stagnating global oversupply (Free World stocks are still in the high 250,000 ton range) plus lagging consumption. And this isn't likely to change in the next few months, certainly not in the U.S. when demand from battery makers normally sags. Conclusion: a continuation of under 20¢/lb prices through spring.

Industrial gases

Some modest price uptrend is possible, if not in the list levels then in the form of reduced discounting. Reason: Liquid gas demand is expected to advance by 5% this year—just about offsetting any increases in capacity—thus leaving operating rates near the current 82-83% level. One prime candidate for an increase is argon where supplies have been tight because of increased use by steel producers. The long-term demand prognosis is also good—with average annual gains of 3-4% and 5-6% seen for liquid oxygen and nitrogen, respectively.

Zinc

Somewhat higher tags could be in the offing. Quotes are likely to average around 35¢/lb over the next few months. It's not so much that demand is up, but rather that the recent price slide may have been overdone. Also suggesting modest gains is the lingering market imbalance. In 1985, Free World output rose 1% at the same time use was falling by a similar amount. Moreover, auto production won't show any big jump—as protective coating use is offset by reduced die castings. Domestic use this year is likely to rise by only 2.5-3%—to 915,000 tons.

Semiconductor shipments

(% change from previous year)

	Integrated circuits	Discrete devices
1983	+23.3	+15.7
1984	+52.8	+34.3
1985	−32.6	−23.7
1986	−48.0	−1.4

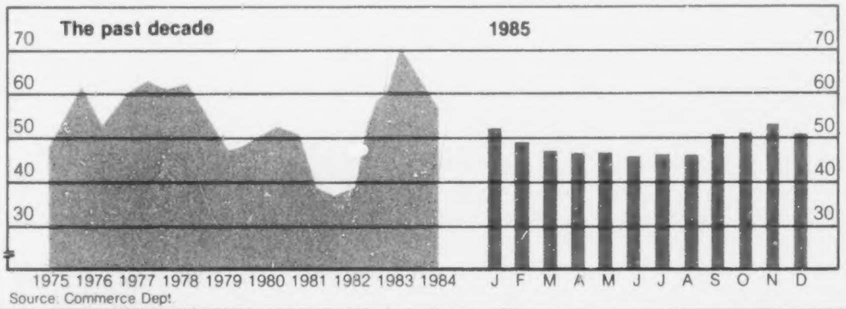
Semiconductors

Demand is beginning to pick up. Shipments are expected to rise gradually each quarter throughout the year. But because of the sharp drops last year, total U.S. billings are still likely to be off about 4% for the year as a whole. The new figures, part of *In-Stat's* new forecast, suggest that the entire drop will be in integrated circuits (off 4.8%). For discrete devices the forecast sees a small 1.5% advance. But all of this does not rule out some modest price firming. By yearend, overall semiconductor sales should be running close to 20% above late 1985 lows, says *In-Stat*.

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Economy stays in gear

The economy, now well into the first quarter, shows no signs of losing the modest momentum of late last year.

Factors to support this thought are easy enough to find: relatively brisk consumer sales, falling unemployment rates, rising military spending, relatively restrained labor and other upward cost pressures—and continuing low inventory-sales ratios.

And capital spending isn't all that bleak, at least not for the next few months. The latest government survey suggests that business spending for plant and equipment will rise at an annual rate of 8% over the first half.

True, the second half doesn't look all that robust. But estimates for the latter half could well be revised upwards if (1) consumer spending remains at current high levels, (2) the weakening dollar begins to slow down imports, and (3) business taxes go up less than House-passed tax reform bill calls for.

Then, too, factory orders are coming in at a fairly healthy clip (top chart). This is keeping backlogs better than 1% above a year earlier and would seem to assure that industrial production will continue to inch up after more than a year of relative stagnation.

Also indicative of improving production schedules is the relatively firm pace of industrial distributor sales. It means that factory managers are buying the critical MRO items needed to maintain or even boost current high output levels.

The rise in the factory work week (with overtime jumping to 3.6 hours) is also indicative of pressure to keep industry production high. In any case, the latest workweek reading of 41 hours for the average factory is the highest in nearly two years—or ever since spring of 1984 when output was booming.

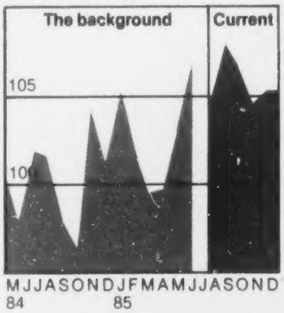
But everything isn't coming up roses. Housing permits (a lead indicator of future housing starts) have come down recently. But the latest figures can hardly be described as dismal, for they suggest that housing starts still have a fighting chance to equal last year's 1.7 million.

Foreign trade is yet another area where the news should eventually take a positive turn. The deficit has failed to improve, despite recent declines in the value of the dollar relative to other currencies. But this is to be expected because the effects of devaluation usually lag by a year or more. Look for some improvement here by early summer.

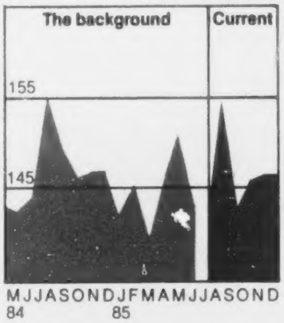
Finally, if there is still any doubt that the basic trend is still up, take a look at leading indicators. The widely monitored NAPM Barometer has remained above the neutral 50 mark for four consecutive months.

Leading indicators

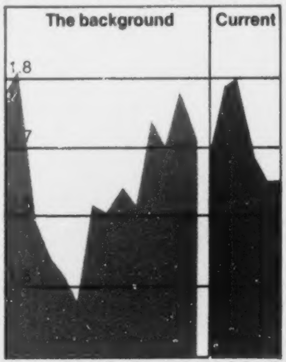
1. Durable factory orders
(Bil. $, seas. adj.)



2. Industrial distributor sales
(Index: 1977 = 100 seas. adj.)



3. Housing permits
(Mil. of units, seas. adj. annual rate)



CURRENT PRICES

No puff in prices

Industrial price averages continue to mark time. Only a fractional 0.1% increase was reported over the past month. And the year-to-year advance is pegged at only 0.7%, with a fair number of declines in individual product lines (see accompanying table).

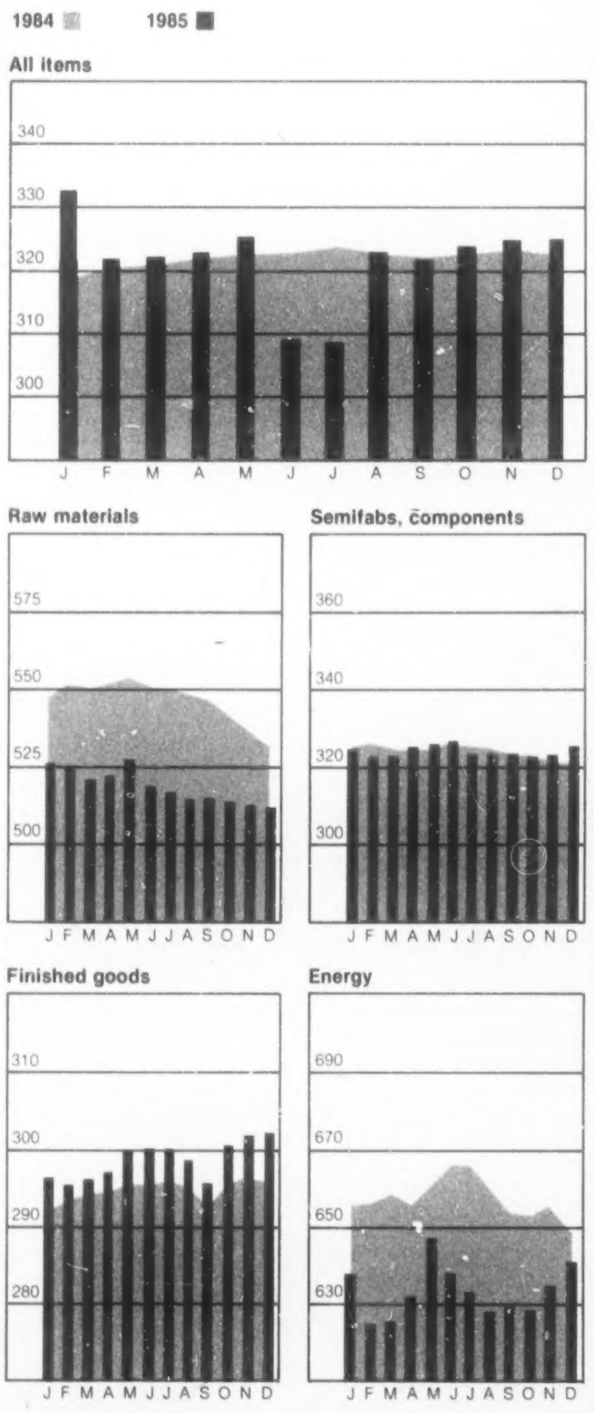
The only major product group to show substantial price increases over the past 30 days has been energy (up 0.6% from month-earlier levels). Behind this gain: increases in diesel fuel, home heating oil, gasoline, and liquid petroleum gas. These were more than enough to offset declines in both natural gas and bituminous coal.

Capital equipment has remained fairly stable. There were small increases in trucks, commercial fur-

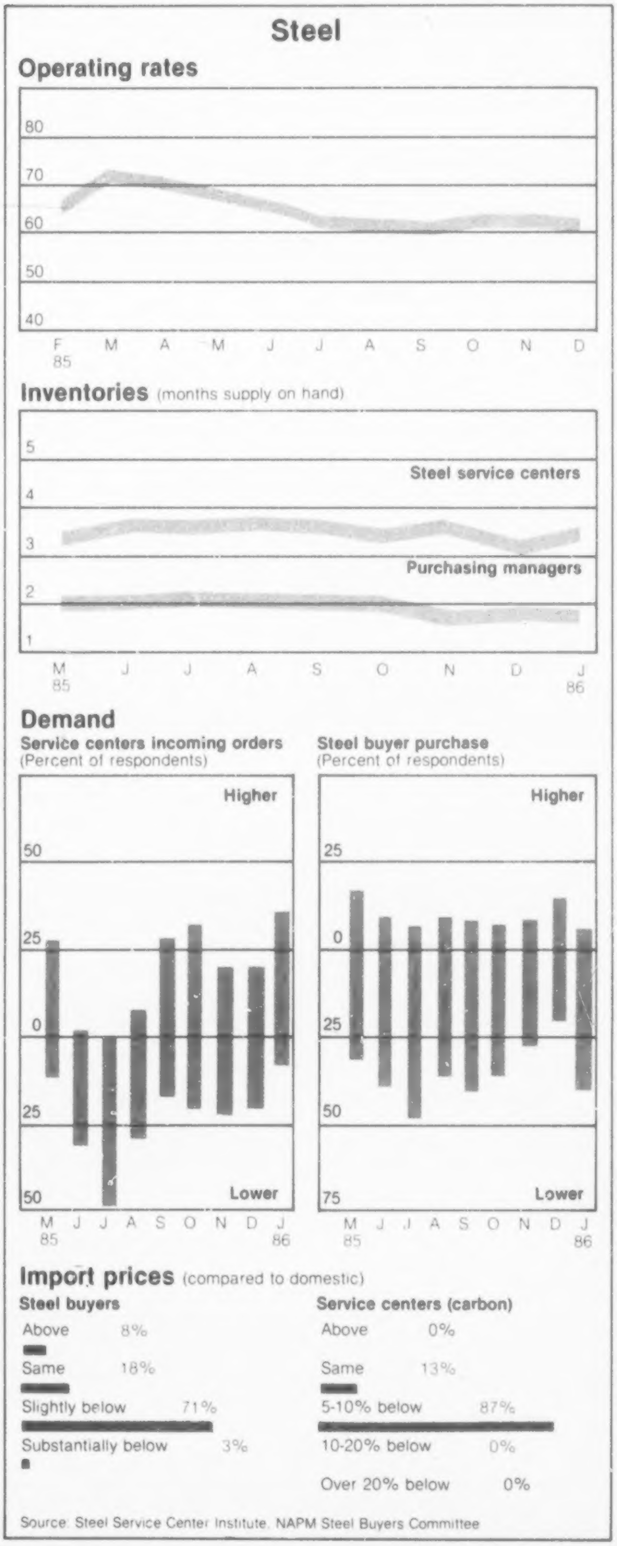
This month's breakdown

	Latest level (Dec.)	% change from: Month ago	Year ago
Bearings	353.2	−0.3	2.2
Bolts, nuts, etc	276.1	0.0	−0.9
Chemicals, inorganic	298.8	−0.2	0.4
Chemicals, organic	350.7	0.0	−0.2
Concrete products	324.3	0.1	3.9
Corrugated cartons	264.6	0.2	−7.5
Cutting tools, small	287.0	0.0	0.9
Electric lamps (bulbs)	346.8	−0.3	1.5
Electronic components	198.5	0.4	0.7
Fans and blowers	361.1	0.4	2.7
Foundry and forge products	363.4	−0.1	0.4
Fuel oil (residual)	955.2	7.8	−15.6
Furniture, commercial	313.7	0.8	4.7
Gasoline	569.9	0.3	3.0
Glass, flat	229.6	0.2	5.0
Glass containers	387.0	0.0	6.3
Gypsum products	356.7	2.1	7.9
Hand tools	378.5	0.4	3.8
Hand tools, power driven	235.1	0.2	3.9
Industrial furnaces	391.8	−0.1	3.1
Integrating and measuring instruments	232.7	−0.1	0.9
Internal combustion engines	347.1	0.1	2.5
Lubricating oil	N/A	N/A	N/A
Lumber millwork	312.1	0.0	0.2
Material handling equipment	296.0	0.5	1.3
Metal containers	361.4	0.9	1.2
Metal mill shapes (nonferrous)	306.0	−0.2	−2.9
Metal tanks	305.3	0.0	−0.4
Motors and generators	351.0	0.0	8.5
Motor trucks	335.2	0.0	8.5
Office and store equipment	153.2	−0.6	0.3
Paperboard	264.6	0.2	−9.8
Paper boxes and shipping containers	266.2	0.1	−3.1
Paper office supplies	236.3	0.1	−3.0
Paint	278.4	0.4	0.2
Plastic resins	296.7	−1.1	−3.1
Precision measuring tools	265.1	1.0	3.6
Pumps and compressors	359.5	0.0	2.1
Refractories	372.6	0.1	1.9
Rubber belts and belting	336.4	0.0	−2.4
Scales and balances	228.9	0.0	−1.7
Steel products	362.9	0.0	−0.6
Switchgear	281.7	0.1	1.1
Textiles, synthetic fibers	150.2	−0.1	−4.8
Textiles, gray fabrics	151.6	0.3	−1.6
Tires and tubes	235.8	−0.3	−0.5
Transformers and power regulators	233.3	0.6	1.5
Welding equipment	297.1	0.4	2.0
Wire and cable	205.3	0.0	2.0

Industrial prices
(Index: 1967 = 100)



Source: Bureau of Labor Statistics



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

niture, plastic industry machinery, textile industry machinery, hand tools, and metal forming machine tools. But these were offset by declines in printing trade machinery, photo equipment, autos, and office machinery—the latter is down by .5%.

An overall no-change reading has also been noted in construction materials. Gains in cement, gypsum board, and plastic construction products were offset by declines in millwork, softwood lumber, and plywood.

Basic industrial materials also showed a mixed trend. There were modest increases in paper, paperboard, grey and synthetic fabrics, metal containers, and nonferrous foundry shop products. But softness prevailed in crude and synthetic rubber, rubber hose, tires and tubes, bearings, and bulbs.

In basic metals, tin, gold, and silver edged lower while aluminum and zinc were beginning to sport higher tags.

Government price watchers who compile these numbers also suggest very little change through spring and into early summer.

STEEL SCENE

Optimism surfaces in steel country

Some fair sized gains in steel demand may be in the offing for the next few months at least.

The evidence on this score is pretty conclusive. Nearly one in three buyers surveyed in the NAPM Steel Buyer Survey expects to increase metal intake over the next few months. That's the biggest increase in nearly two years, and more than twice as many who say they might be cutting back a bit.

Distributors responding to a new Steel Service Center Institute (SSCI) query tell pretty much the same story. They even wax optimistic—as 37% anticipate increases in incoming orders, outnumbering those who expect to see some declines by a better than five to one ratio.

However, keep in mind that these are bascially short-term demand forecasts. SSCI president Andrew G. Sharkey continues to be more guarded in his view of the year as a whole. He predicts that his group will do well by approximating last year's peak of 21-21.5 million tons shipped.

This could be one reason why steel service centers remain basically cautious on inventories.

Specifically, some 46% of distributors who responded say they feel their steel holdings are too high. That's six times as many as the 8% who say that some increase in stocks might be in order.

If service centers should not be overly concerned about inventories, they might well be keeping a weather eye on cost-price pressures. The new survey finds that their gross margins have been slipping lately.

And the problem could be getting worse. Distributor answers to another question—on how replacement costs six months from now will compare with replacement costs today—suggests still more pressure on the steel cost front.

Indeed, some four out of five expect their steel costs to be higher in the third quarter than they are now: 69% see a cost advance of 2-5% and 12% put the possible increase at above 5%.

One reason for this projection could be the recent price adjustments made by producers. Adjustments have cut lists but reduced discounts—with the ultimate goal being an increase in overall market levels. Clearly, the majority of service centers feel that this will ultimately have some impact on their own procurement outlays.

Whether this does indeed happen could well depend on import prices which up until now have been putting significant downward pressure on market quotes.

Some 87% of queried service centers, for example, report that import prices of both carbon and stainless steels continue to run under comparable domestic levels. For stainless, some 20% of the respondents call the price advantage significant.

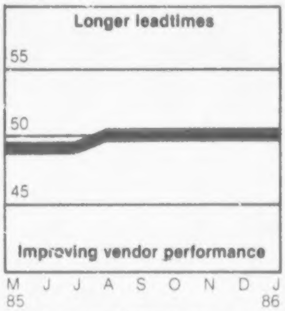
Continuing price competition from overseas is verified by steel buyers. Some 74% say that foreign mills are offering price breaks,

These same buyers also seem to think that this pattern will continue. That's the only way to explain the finding that they plan to be as dependent on foreign steel this summer as they are today.

Monthly procurement status report

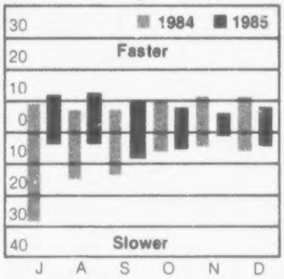
Leadtime index

A "diffusion" index based on 158 key commodities. Avove "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.

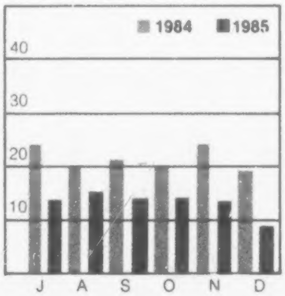


Delivery performance

(Percent reporting deliveries)

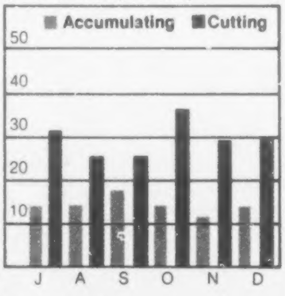


Forward commitments



Inventory strategy

(Percent of respondents)



Source: NAPM

PROCUREMENT STATUS

Leadtime tabs at rock bottom

Production schedules may be edging higher. But you'd never know it by looking at the latest leadtime tabulations.

There have been a few isolated stretchouts—most notably in the electronic component sector which is showing signs of coming out of its 1985 nosedive. But, generally, industry waits remain pretty much where they've been over the last six months—at rock bottom levels.

Some 85% of the more than 150 product lines tracked monthly by *PW* remain relatively unchanged compared to a month ago. Where there have been stretchouts, they've been pretty much offset by improvements in other areas.

Even vendor deliveries, which typically slow down when the economy is in uptrend, continue to improve. Of buyers responding to the latest NAPM Business Survey Committee report, 8% note a speedup. That more than offsets the 5% who have experienced some slowdown over the latest 30-day period.

U.S. industry is operating considerably below its production capacity—a conclusion that is further substantiated by the fact that not one single item is currently on NAPM's short-supply list—a condition that has prevailed for 11 consecutive months.

This is prompting a continued shift in buying policy which has many more buyers cutting back on inventories (30%) than are adding (13%).

There's also a lot more hand-to-mouth buying of production materials. One of every five PMs surveyed say they are going this route, with another 44% committing only 30 days in advance.

At the other end of the spectrum is the miniscule 9% who say they are committing 90 days or more ahead. That is the lowest figure in decades, further proof that no one is worried about supply.

Leadtimes and availability

Chicago: Coming in (in weeks) coated/galvanized steel (7-8), and bichromate chemicals (½). On the upside are special brass tube (8-12), softwood framing (1½), and cold-rolled steel sheet (7-8).

Cleveland: Shorter leads for cold finished aluminum (8), and maintenance paint (2). Stretching out: reconditioned steel drums (2-3), and polyethylene and PVC (3).

Los Angeles: Status quo here: galvanized steel (12-14), aluminum tubing (6-8), grey iron castings (6-8), brass castings (4-6), electro-mechanical devices (6-8), domestic fasteners (6-8).

Houston: Most metal waits are unchanged—at 1-4 weeks. Other typical leads: Pumps (17-31), corrugated cartons (2), plastic resins (2-3), and plastic bottles (4).

Philadelphia: Titanium (now 8-10 weeks) could move out a bit. Longer leads also for copper alloy tubing (5-6), copper alloy sheet and plate (6-8), and high temperature metals (8-19). Most other metal items remain unchanged.

Pittsburgh: The tin crisis is causing delays (2 wks and 6 wks for under-a-ton and ton lots). Other waits: corrugated (3-4), all types of drums (1), waterproof papers (8), steel strapping (2-3), coil coating paint (5), PVC (6), metal alloys (2).

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No big wrinkles in packaging

Although packaging may not continue to be the bargain it has been, prices are not likely to take off.

So say the majority of purchasing executives responding to a new nationwide *PW* packaging survey. The general feeling is that stronger paper prices will make the big difference in 1986—with last year's declines in linerboard and corrugated giving way to some modest advances.

Some of the survey's key findings:

Last year's prices: More than half of the respondents reported lower overall packaging prices last year and another 25% said their situations had not changed. Almost everyone reported declines in corrugated—with some selective slippages also noted in folding boxes, paper bags, and plastic materials and bottles. On the other hand, a handful of respondents said they had to pay a bit more for both metal cans and glass containers.

1986 vs. 1985: Three out of four respondents see some price acceleration ahead—far outweighing the 22% who anticipate a repeat of 1985 and the handful hoping to improve on last year's price performance.

Actual price trends: No one anticipates further declines—though close to 30% feel they may be able to hold the line. The consensus projects an increase of only about 3%. Also on a positive note—no one sees 1986 increases in excess of 6%.

Paper packaging is responsible for most of the projected price increases. The estimated increase in corrugated is put in the 3-5% range. Several buyers note that they've heard of new attempts to boost linerboard into the $290/ton range—$30/ton above current prices.

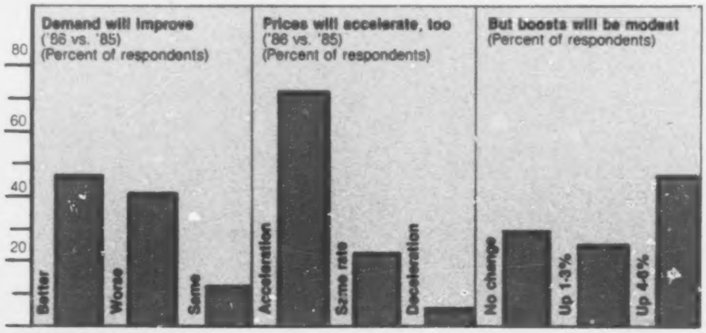
Paper industry forecasts also call for about a 2.5% increase in corrugated container demand, reversing the 2% decline of last year. Similarly, last year's 1% decline in folding paperboard boxes will give way to a 2-3% increase in 1986.

These same industry forecasts also project a 2% increase in demand for metal cans, and 4% for plastic bottles. Glass containers, however, will probably be lucky to equal 1985 levels. There are also scattered predictions for advances in plastics.

The new survey confirms this mild demand trend. Respondents put the average 1986 gain in demand for packaging at about 3%. But demand trend or not, most purchasing managers seem determined to keep a tight lid on prices. Their strategies: redesign, substitution, use of lighter gauge materials, more vendor participation in cost-cutting and planning, and hard-nosed bargaining.

The trend in materials substitution is toward plastics. Paper, glass, and metal will gradually lose out to this cheaper alternative. **PW**

1986 Packaging Trends: A Buyers' View



Source: PurchasingWorld

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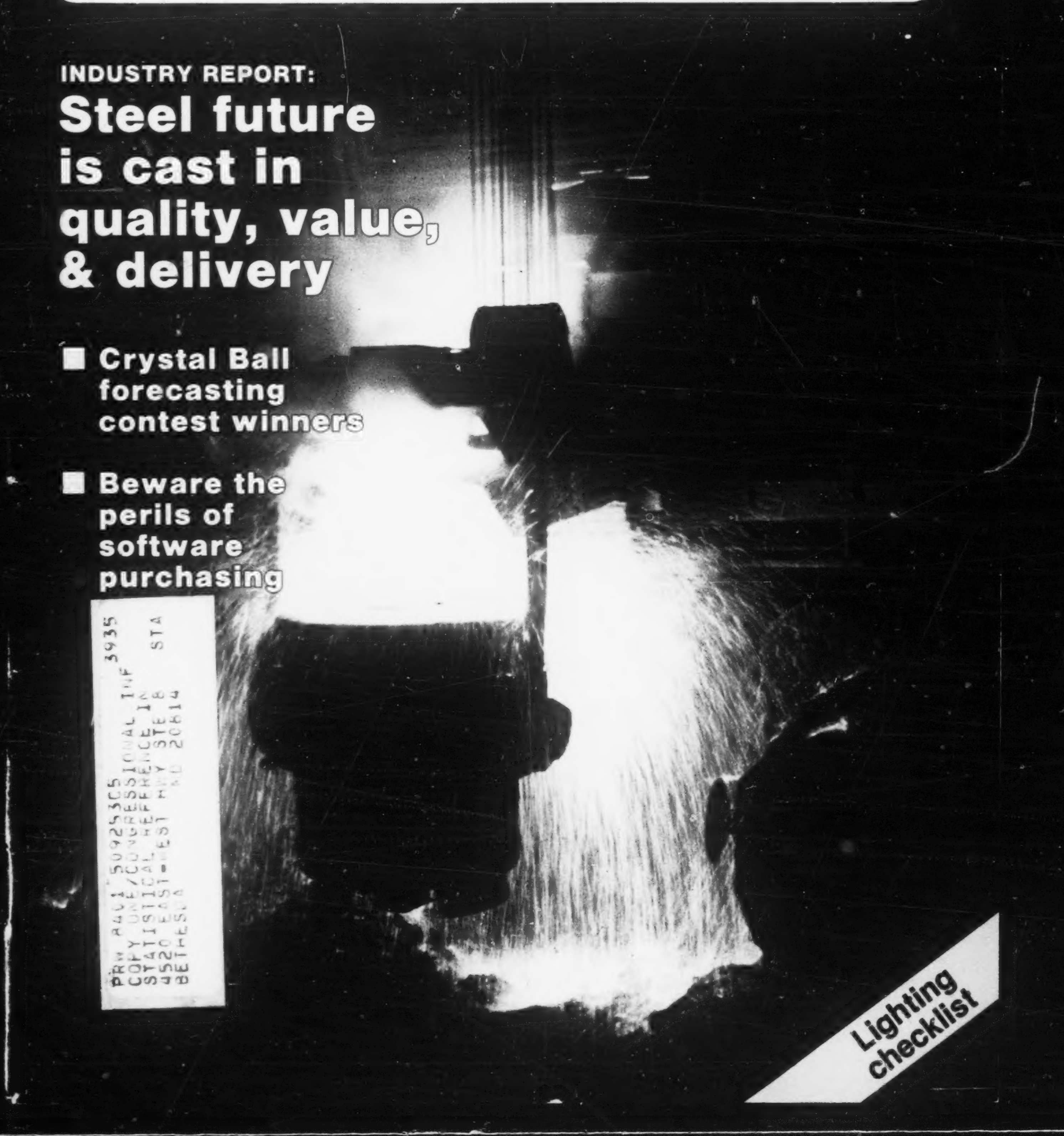

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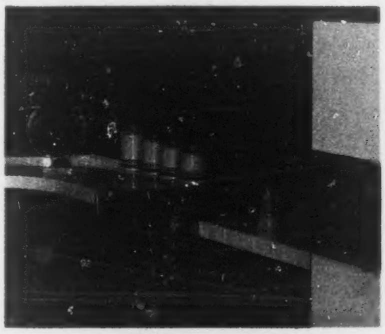
March 1986
Vol. 30 No. 3

Special report: Steel

29 Buyers hold good cards in steel negotiations
Market factors continue to work for buyers, with little chance of price increases sticking.

30 Steel future is cast in quality, value, & delivery
American industry is making "world class" products with advanced processes.



Features

36 GE purchasing brings good things to life
Major appliance industry is a gemstone in U.S. manufacturing. Here's how GE does it.

42 *PW*'s Crystal Ball contest winners
You have to be a pretty good economic seer to top 1,112 of your purchasing peers in forecasting, but that's just what Deere & Company's Robert H. Lees did.

53 Rates riding in the slow lane
Good news for transportation buyers from the latest Wharton Econometrics Report on Transportation prepared exclusively for *PW*.

60 Look for high performance in corrugated containers
High performance shipping containers can be money-savers, says Packaging Corp. of America. See if they're for you.

62 The buyer/analyst concept
Here's one way to improve efficiency in purchasing and material control, used by JI Case Co.

66 Just-in-time: make sure you know what you're getting into
All the questions you should ask before getting into JIT.

68 Getting suppliers involved in purchasing quality improvement
Tennant Co. works hard to involve suppliers in its quality goals.

80 Bright ideas lighting the future
A checklist of developments in lighting

Cover photo courtesy of Lukens Steel Company

42

Departments

4 **PW Pointers**
6 **Editorial**
8 **PW Predicts**
17 **Business Datatrak**
47 **PW Office '86**
54 **Law**
56 **Negotiations**
74 **Personal Computers**
84 **Software**
87 **Literature**
93 **New Products**
96 **Sample Pak**
98 **Milestones**
100 **Ad Index**
101 **Classified**
102 **Survey of the Month**

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PW PREDICTS

Robert S. Reichard, executive editor

Oil greasing the way for more growth

Add tumbling oil prices to the list of factors likely to keep a lid on inflation over the next 6-12 months.

Although the exact amount of decline in crude oil is still subject to change, it is clear that the drop will affect all areas of the economy.

Looking first at energy, the dropoff means refined petroleum products could fall as much as 20%—possibly as early as next spring or summer. The rule of thumb for gasoline is that every dollar fall in the price of crude translates into a 2.5¢/gallon drop at the pump. That suggests gasoline could be selling for under $1/gallon before too long.

Elsewhere, the slide means energy-intensive transportation industries such as airlines and trucking will have substantially reduced operating costs and, therefore, lower-than-previously forecast rate increases. Other heavy energy users, such as the aluminum industry, are also likely to gain in the long run in the form of smaller power increases. Overall electricity rates should be up only about 2% this year.

What does this all add up to? Assuming crude oil settles around the current levels, there would be about a 1% reduction in the nation's overall 1986 inflation rate, to perhaps only about 2.5-3% (GNP deflator basis). And, since energy is such an important factor in consumer outlays, the cost-of-living index could well show an even smaller 2-2.5% advance.

A lessening of inflationary expectations will allow the Fed to ease money a little more than it might have otherwise. And sharply lower fuel prices should give economic activity a shot in the arm because the dip in oil prices to current levels is equivalent to a tax cut of $40 billion. This will provide a lot more cash for additional consumer spending. The oil price slide could push real GNP up another 0.75-1.0% this year.

The additional prod could result in a 3.5-4% real growth rate. That's fairly close to the Administration's estimate which, until the oil price tumble, seemed far too optimistic.

What's true for the U.S. will also be true for most of the other major Free-world industrialized nations. An OECD spokesman, for example, says that member nations, overall, will experience about a 1% drop in previously predicted inflation rates.

Also on the international front, faster global growth will eventually ease the record U.S. trade deficit, as overseas buyers end up with more money to purchase American goods.

But not everybody is happy about the plight of oil. Bankers are now much more concerned about the financial viability of such debt-ridden oil producers as Mexico, Nigeria, and Indonesia. Some political destabilization is also possible in some of the oil-producing nations.

But, overall, the impact of falling crude oil prices has to be regarded as very positive—providing the nation with another year of solid non-inflationary growth and greatly improved prospects for more of the same in 1987.

Office automation

The nation's machine-oriented business offices may be becoming a lot more efficient. But these advances are not being made without problems.

A new Administrative Management Society study of 45 companies finds three major hitches in the actual use of office automation. The first problem, and it comes as no surprise, is the lack of equipment standards. The other two difficulties are "people problems." The crossing of organizational lines involved in office automation continues to cause friction—so-called "turf" battles. And, there is still some anxiety on the part of workers being asked to use office automation systems.

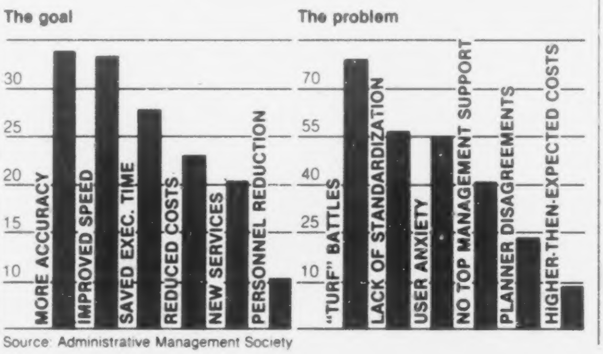
Interestingly enough, having to justify OA in concrete dollar-saving terms has not been a major barrier in gaining approval from top management. But the study adds that at least some effort must be made to "price-tag" the savings realized from intangible benefits so that top management can see a "bottom line."

But whatever the problems, they are obviously worth putting up with. More than four out of five survey respondents state their office automation objective as increasing the speed and accuracy of information flows.

On the other hand, personnel reduction is the lowest on the list of reasons for implementing OA. Reason: Data and word processing have long since wrung the fat out of such labor-intensive operations as routine correspondence, invoicing, and inventory control.

Office automation

(Percent of respondents)



Source: Administrative Management Society

PW PREDICTS

Energy

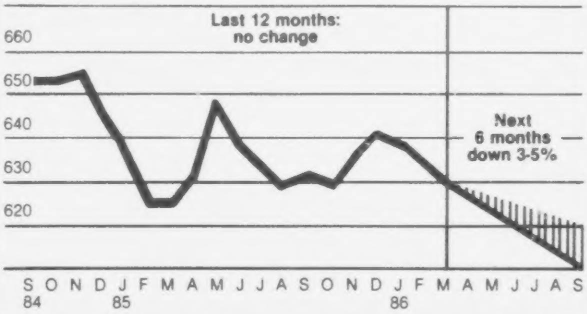
CURRENT SITUATION: Credit the oil tumble with revision of energy cost forecasts for the year. Basic energy costs are now 25% under levels of late last year, and further declines are inevitable. For the longer run, the crude oil decline could make oil more competitive with coal and natural gas in some industrial and residential markets. **There'll be fallout in other energy sectors** as less interest is shown in unconventional power sources like solar energy and syn fuels.

DEMAND: Any increase in 1986 usage—stemming from lower prices—should be minimal simply because consumption habits change slowly. *PW*'s usage estimates show only a small upward revision for this year: oil (+0.5% vs. −0.5% last year), natural gas (+0.5% vs. −2.5-3% in 1985), coal (+2% following last year's 3.5% advance), and nuclear (+6% vs. last year's 13% rise). **Overall energy usage will gain 1.5-2% but will still be well under the 3% real GNP gain expected.**

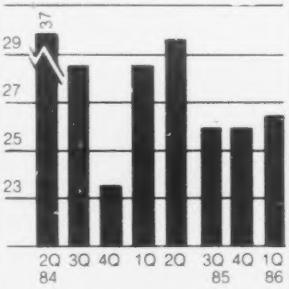
SUPPLY: There's more than enough of everything to go around. This is true of oil where all-out Saudi Arabian production spurred the recent price decline. There's plenty of non-OPEC oil around too. Overcapacity is also evident in coal where production is expected to hold at 1985 levels—keeping operating rates well under preferred levels. **Industry analysts put the current natural gas surplus as high as 15-20%.**

PRICE OUTLOOK: Oil-based product prices will fall the most—perhaps as much as 20¢/gal. off the average gasoline price by summer. Heating and resid oils will also fall. Coal and natural gas will be insulated to some extent because both are still cheap compared to oil. The average gas price is now the equivalent of $15-18/barrel oil—and coal is even cheaper. **Gas quotes could be off 1-2% this year—while coal barely holds its own.** Electricity should only rise by 2%.

Fuel & Energy prices
(Index 1967 = 100)



Polyvinyl chloride prices
(Market prices, ¢/lb.)



Polyvinyl chloride

Prices are beginning to rise on a combination of increasing raw material costs, the need to improve profit margins, and better-than-expected demand (as a milder than normal winter in many areas of the country draws down pipe inventories). Market prices for pipe grade, for example, are now in the 26-27¢/lb range—up 1¢/lb from month-earlier levels. And some producers talk of reaching 30¢/lb by sometime this spring. Part of this optimism is based on forecasts for a 3-4% increase in 1986 demand and fairly high 80-82% operating rates.

Copper

The situation continues to improve. Inventories are down—Comex holdings are off 50,000 tons in 1985 and Free-World stocks are down to under a million tons. Another plus is the strong dollar. Nevertheless, the red metal is still finding it hard to sustain a significant rally because speculative interest has all but disappeared and global demand seems rather flat. Refined copper consumption is expected to remain at last year's 8 million ton level on a global basis. But this does not rule out some advance by spring, when demand reaches its seasonal peak, and hedge buying to beat a possible strike add to the overall thrust.

Zinc

Gluts continue to plague the market. Current Free-World production and consumption figures point to a 25,000 ton excess this year—as the Chinese offtake drops (from 195,000 metric tons last year to 140,000 tons in 1986). Other bearish factors: 1) Cominco's decision to up production and 2) the mint's declining demand for pennies. Another of the metal's problems: A drop in auto die casting demand which is offsetting increased coating use by carmakers. No wonder the U.S. price recently dropped close to 30¢/lb—well under the 34.5¢/lb quote that prevailed only a few months ago.

Adhesives and sealants

Demand should increase by 2.7% a year over the next decade—reaching 13.5 billion lb by 1995. But the average price could rise a lot faster, primarily because of the more expensive synthetics (acrylics, polyurethanes, epoxies, polyesters, etc.) that are gradually replacing natural-based products. According to a new

Aluminum

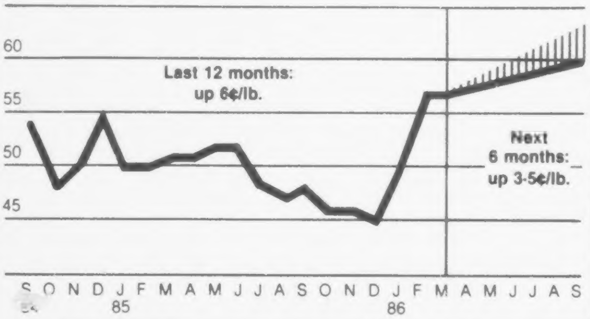
CURRENT SIUATION: Expect some modest price firming. Price increases have been posted over the last few months on basic ingot and billet, common alloy sheet, rolled foil products, building products, and non-heat treated plate. Behind the advance: Slowly falling world inventories, scattered mill shutdowns (particularly here in the U.S.) and somewhat better demand. Final 1985 shipments ran better than 3% above 1984.

DEMAND: The slow uptrend will continue. 16.2 billion lb are expected to be shipped over the current year—1-3% more than in 1985. Most markets should share in the growth—aircraft will lead the way with a 4% increase. Building and construction will be about the only sector not to show any real gain. **In the longer run, domestic usage is expected to rise about 3-4% a year.** Auto use will jump to 200 lb per vehicle from the current 137 lb per car.

SUPPLY: There will still be excess metal around—even in the unlikely event of some hedge buying to beat a possible U.S. strike. Free-World stocks, pared by 400,000 metric tons over the last year, remain in the high 1.5 million ton range. Other supply-reassuring notes: 1) Noranda has just reactivated a 105,000 tpy smelter, 2) some closed U.S. capacity could be put back on stream, 3) reclaimed metal now accounts for nearly one-third of all U.S. needs, and 4) overseas capacity continues to grow.

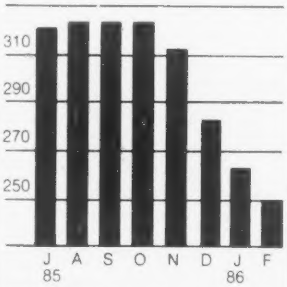
PRICE OUTLOOK: Any added near-term price advances are likely to be small—both in ingot and in semi-fabs where discount reductions have had some buyer opposition. In any case, it will take time to digest already-posted boosts. Any sustained ingot advance is likely to reactivate closed capacity. **Best bet for ingot then: a price in the low 60s by summer--3-5¢/lb above current levels.**

Aluminum ingot prices
(cents/lb.)



study by the Freedonia Group of Cleveland, OH, the average price could be near $1.19/lb by 1995—the equivalent of a substantial 3.9% annual rate of gain.

Mercury
(N.Y. $/Flask)



Mercury

Figure on continuing shaky prices—perhaps even below recent levels which have dropped close to $70/flask—more than 20% under levels prevailing this past October. Behind the slide: disappointing global consumption at a time when producers, with a lot of excess capacity, have been trying to expand their share of the market. On the capacity front, mines have only been operating at 50% of their potential—with added supplies coming from secondary metal (a big 27% of the market here in the U.S.).

Personal computers

Demand gains will be modest this year—up only 12% in unit terms, not all that much better than last year's disappointing 10% advance. More important, prices are still edging lower. Some IBM models could decline by as much as 15% this spring. And by Christmas, some of the firm's more basic models, which sell for $1,500 today, could be selling for under $1,000. This, in turn, suggests heavy pressure on competing producers—with additional downward thrust coming from IBM clones (such as Leading Edge) which sell for roughly 40% less than comparable IBM models.

Computer software

The number of highly successful low-priced business packages continues to proliferate. One result is that older, more established products are now available at prices well under producer lists. The latest version of Lotus 1-2-3, for example, can be had for as much as 30% under list. Also look for tags on higher-priced micro software to continue dropping—as customers press for both volume discounts and site licensing (paying a fee for product duplication rights). The cut-rate mail order share of the micro software market is also continuing to grow and is expected to capture 40% of the overall market by 1990.

Paper

The market is firming a bit. Signs of the times: 1) Producers are again attempting to push linerboard prices up into the

Nonferrous metals

Look for the price of some key nonferrous metals to increase—if not this year then certainly by 1987 or 1988.

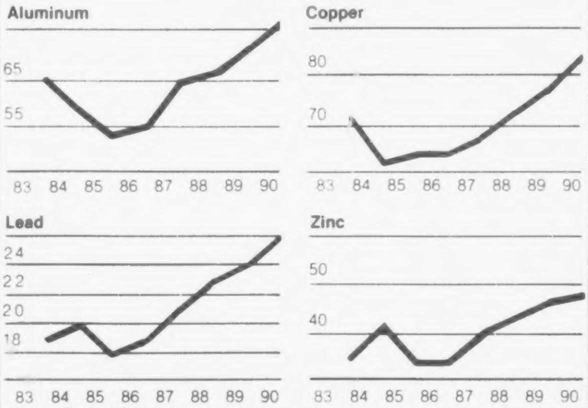
This is one of the major findings of a new Bank of America Commodity Information Service report. The accompanying chart suggests that 1988 global nonferrous quotes—as measured by the London Metal Exchange (LME)—should be running as follows above last year's extremely depressed levels: aluminum (40%), copper (14%), lead (28%), and zinc (29%).

Some of the other cogent long-term observations:

- **Aluminum.** Demand should increase at a 2.5% annual rate—well under the 4.3% pace of the 1970s. The slowdown reflects saturation of the metal's major end-use markets (construction, transportation, and packaging) and competition from plastics and other materials.
- **Copper.** Demand will increase slowly over the next decade, averaging about 1.5% a year. Consumption in industrial countries, where the intensity of copper use is declining, will be virtually flat. The red metal will also continue to be plagued by substitution of alternative materials such as plastics and aluminum. The greatest demand loss will occur in telecommunications, as fiber optics gradually displace copper cables.
- **Lead.** Worldwide growth is expected to average 1-2% over the next decade. Batteries will continue to be the big end use despite much discussion and research concerning non-lead battery substitutes. On the other hand, batteries are lighter and longer lasting—implying lower lead use per unit.
- **Zinc.** Count on about a 2% rate of demand gain over the longer pull. Expanding use of galvanized steel in the auto industry will be the prime cause. But even these gains will be held down by reduced overall auto weight and thinner zinc coatings per pound of steel.

LME prices into 1990

(cents/lb)



Source Bank of America

$290/ton range. 2) Several firms have posted increases in commodity white paper grades. And 3) Market pulp lists have just moved up to $350/ton. Behind the more bullish trend: A rising incoming order flow that is strengthening backlogs—with added assists coming from declining inventories (on the producer level for market pulp and at box plants for linerboard). Figure on the slow uptrend continuing, with price averages for paper products likely to advance 2-3% over the rest of the year.

Polypropylene

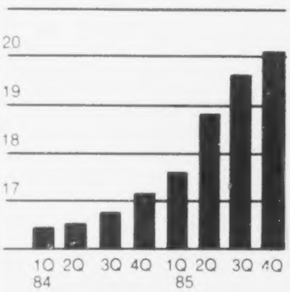
Prices have managed to inch ahead about 1¢/lb boost that was recently posted. In any event, the homopolymer grade is now going for about 36-38¢/lb. Other signs suggesting a firmer 1986 price scene would include 1) rising demand which looks to advance about 4-5% this year (with good gains in both packaging and nonwovens), and 2) relatively high operating rates (which are expected to average out at the 92% mark this year). And by 1987 the rate could be even higher—probably near 94%.

Office space

Continue to press for concessions—particularly in suburban areas where the average vacancy rate has soared to a peak 22%. Suburban locations sporting higher-than-average rates include Dallas, Denver, Houston, Oakland, Orlando, Phoenix, San Antonio, San Jose, and Tampa. The average downtown vacancy also remains at peak rate (16.5% level)—with 20% or higher figures for Denver, Houston, New Orleans, Oakland, Oklahoma City, San Antonio, San Diego, San Jose, and Tampa.

Office vacancies

(%)



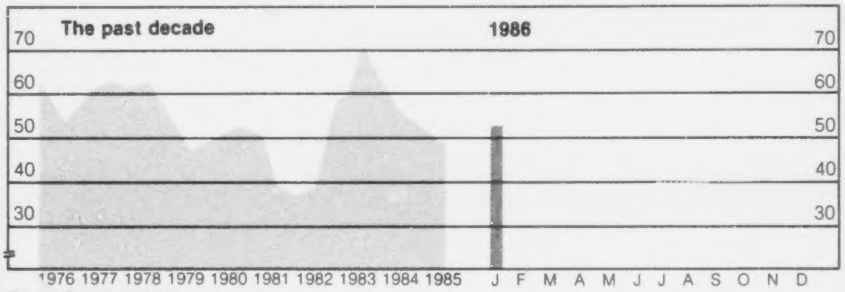
Lead

Disappointing demand from battery makers continues to put downward pressure on prices. This year, the industry looks to turn out only 72 million auto and industrial units—just fractionally above last year's 71 million and little changed from 1984 levels. The fact that Free-World production was up 2% last year when consumption actually dropped a bit isn't helping matters either. Ditto, the continuing lead-in-gasoline phaseout. As such, it's no surprise to see the metal moving at only 18¢/lb. Also, don't look for any major rally—with the metal hard pressed to break even the low 20¢/lb barrier anytime soon.

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Leading indicators point to good 2Q

The new year is getting off to a surprisingly good start—with new orders, production, and sales all exceeding earlier projections.

And all signs suggest that the upcoming second quarter will be equally as buoyant. For one, the bellwether NAPM Business Barometer moved further above the neutral 50 mark over the past month.

Other strong and positive factors are at work in the economy as well. The recent plunge in the price of crude oil will probably add as much as a full percentage point to the U.S. annual growth rate this year. GNP should advance almost 4%.

This in turn could make budget cutting a bit easier. Reason: Every percentage point increase in the GNP growth rate translates into an additional $17 billion increase in revenues to the federal government.

The oil price decline will work through the economy in other positive ways. Reducing inflationary pressures by as much as one percent this year will give the Fed more leeway to ease the money supply further.

Continuing tight inventories are also contributing to the overall bullish picture. The stock/sales ratio for all manufacturing industries, dropped to 1.40 months at the end of 1985 (the latest reading available). That's a significant decline from the near 1.50 level prevailing just a year earlier—and would seem to virtually guarantee that new final demand increases will be quickly translated into new orders.

Gains in orders already seem to be underway. The latest NAPM Business Survey Committee report shows 34% of the respondents reporting bigger orders—nearly twice as many as the 18% noting declines.

Some of the other more specific business barometers have also been doing quite well. Auto sales jumped to an annual rate of 11.5 million in January—the highest figure since the incentive-inflated numbers of last August and September.

Domestic cars did exceptionally well with some 8.6 million (at annual rate) clearing the market in January vs. only 8.1 million (at annual rate) in December.

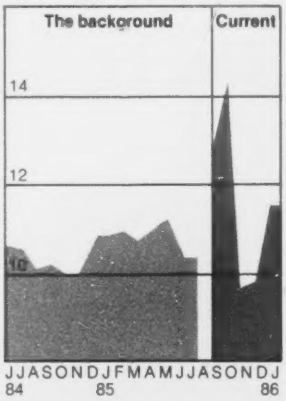
Construction awards—a time-tested barometer of future building activity—also remain strong, though just a shade under recent highs (see chart).

This should help bolster appliance activity. This is confirmed by a new Conference Board survey showing that 34% of queried families expect to buy a major appliance over the next six months.

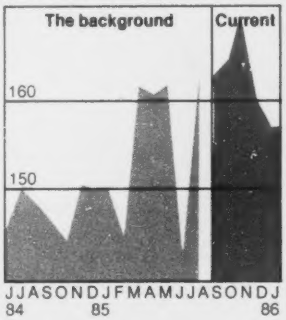
Another plus sign for the economy is the still-improving employment sit-

Leading indicators

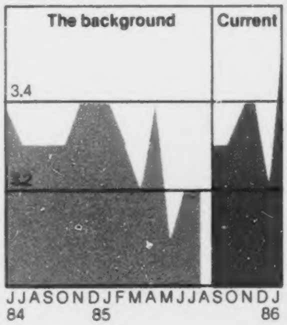
1. Auto sales
(Mil. of units, seas. adj. annual rate)



2. Construction awards
(Index: 1977 = 100)



3. Factory overtime
(Hours)



uation. Business payrolls in January jumped by 566,000 jobs—the biggest gain in more than two years. Particularly encouraging is that manufacturing jobs have been rising.

Also worth noting is that the jobless rate continues to fall (it's now under 7%), help wanted ads are increasing, and overtime remains high. The latter (see chart) means producers are being increasingly pressured by incoming orders and could be ready to increase their workforces even more.

R&D escapes budget axes

Research and development is still going strong despite all-out efforts by government and industry to hold down costs. Outlays for new products and new processes could approach $117 billion this year—up 9.5% from 1985.

Battelle Memorial Institute, supplying new estimates, adds that the gain will be substantial even after factoring out the inflationary impact. Specifically, the gain (in real terms) will be a relatively healthy 4.5%—slightly above the 4% rate of the past decade.

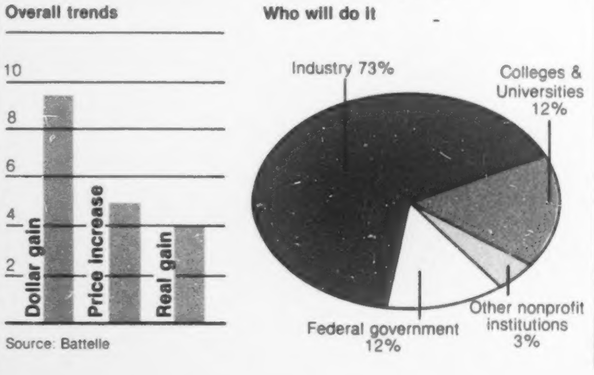
Most of the funding will come from private industry (49.8%) and from Uncle Sam (46.7%). Other small contributors are academia (2.2%) and other organizations (1.3%).

Industry will be the dominant performer here—they will do about 73% of all the work. The federal government and universities will each do about 12% and other nonprofit groups will take up the remaining 3%.

What industries will be most active? The aerospace industry will lead the pack with $18.8 billion worth of R&D—78% of which will be funded by Uncle Sam. In second place are electrical machinery and communications sectors ($17.7 billion). Following will be machinery ($11 billion), chemicals ($9.8 billion), auto and other transportation ($7.7 billion).

Even the smokestack industries will contribute. Iron and steel makers are planning to boost R&D spending about 60% to $800 million.

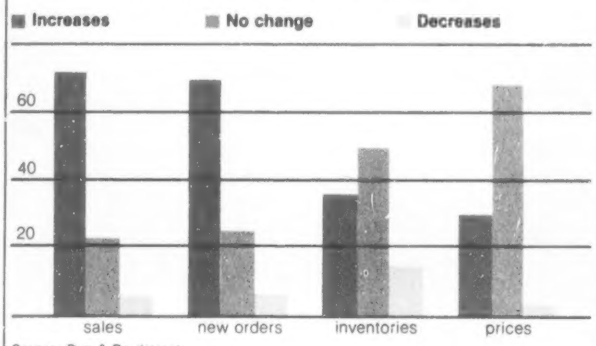
1986 Research & Development



Source: Battelle

A first quarter '86 business appraisal

(1st Q '85 vs. 1st Q '85, % of respondents)



Source: Dun & Bradstreet

The new study also notes that there is a tendency recently for federal support to shift more toward development and away from basic and applied research. But Battelle spokesmen add that there is still a small but significant amount of basic research being performed.

They're chipper in the executive suite

The nation's top executives are still sanguine about business prospects. Two convincing pieces of evidence of this:

- **The Conference Board's Index of Business Confidence:** While the latest reading of 55 is under 1984 peaks, it still represents a 3-4 point increase over the levels of three and six months earlier.
- **Dun & Bradstreet's Sales Optimism Index:** This key measure (the percentage of firms expecting increases minus those expecting declines) is also under its 1984 high. But again, the 1Q 1986 reading of 66 indicates that most respondents are still betting on more gains.

The D&B survey suggests several reasons why the current positive climate is likely to continue for a while. Factory new orders (which reflect sales a few months down the pike) remain high—70% anticipate 1Q increases compared to only 6% who see declines and 24% who see no change.

The same study also indicates continuing inventory restraint, thus ruling out unwanted buildup.

Finally, there's the continuing absence of any inflationary pressures. Indeed, the 30% of D&B respondents who expect prices to run above year-earlier levels is actually slightly under the comparable 34% and 32% figures of the last two quarters of 1985.

But perhaps the best indication of corporate optimism about 1986 comes from the Conference Board's survey. Despite the rather modest growth gains anticipated, some two-thirds of the survey respondents say their firms have set 1986 profit targets above 1985 levels—and one-third put the earnings advance in the 5%-plus range.

BUSINESS DATATRAK

CURRENT PRICES

Oil presses prices

Average industrial producer prices edged down last month about 0.4%, mostly as a result of declines in energy.

Overall fuel and power tags tumbled a hefty 2.9%. Sharing in the decline were gasoline, home heating oil, diesel fuel, residual fuel, kerosene, jet fuel, and coke overrun products. These were more than enough to offset the slight increases in natural gas, finished lubricants, and liquid petroleum gas.

Also note that current levels are still far under those suggested by the recent slide in crude oil. Look for price drops of equal or even greater magnitude over the next few months as the oil shock continues to exert repercussions through the refined petroleum products pipeline.

Machinery and equipment are more representative of the non-energy price trend. Increases in heavy trucks, office machinery, machine tools, and construction machinery pretty much offset declines in chemical machinery, pumps, compressors, truck trailers, and light motor vehicles.

The latter reflects the new wave of manufacturers' subsidized financing which has brought down prices of both light trucks and passenger vehicles. The car decline could continue for a while, as subcompacts are subjected to increased competition from new South Korean and Yugoslav imports.

There are, of course, a few areas where prices have been advancing. Industrial chemicals, notably organics, moved up over the last reported month. But with petrochemical feedstocks now beginning to drop, these increases could be short lived.

A more meaningful rise, however, may have occurred in construction materials which have been bolstered by relatively low interest rates and a mild winter in many areas of the country.

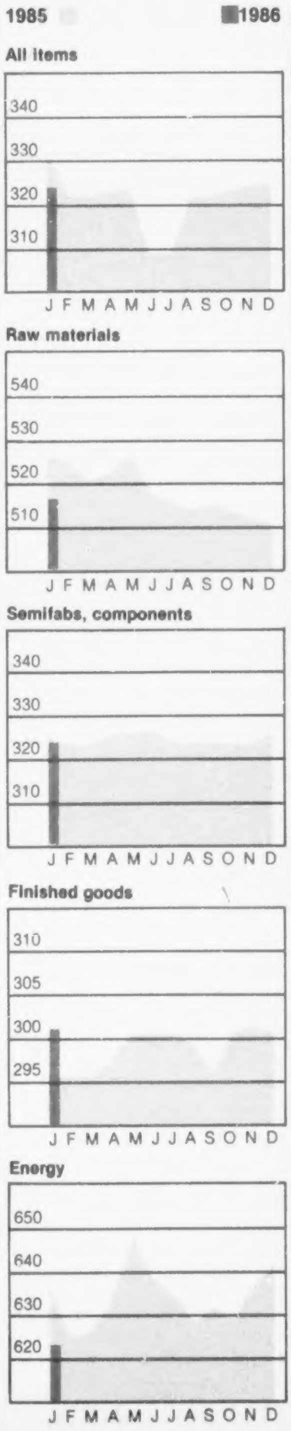
Increases have also been posted on plastic plumbing products, wiring devices, clay construction products, gypsum products, and concrete—more than offsetting fractional declines in plywood and millwork.

This month's breakdown

	Latest level (Jan.)	% change from: Month ago	Year ago
Bearings	353.5	0.1	2.3
Bolts, nuts, etc	275.7	−0.1	−1.6
Chemicals, inorganic	298.8	0.0	0.0
Chemicals, organic	358.5	2.2	1.4
Concrete products	325.5	0.4	3.5
Corrugated cartons	264.6	0.0	−7.6
Cutting tools, small	288.4	0.5	1.1
Electric lamps (bulbs)	346.5	−0.1	2.0
Electronic components	198.9	0.2	0.2
Fans and blowers	361.9	0.2	1.2
Foundry and forge products	363.8	0.1	0.4
Fuel oil (residual)	877.7	−8.1	−21.9
Furniture, commercial	315.2	0.5	5.0
Gasoline	532.8	−6.5	0.5
Glass, flat	229.9	0.1	3.9
Glass containers	336.0	0.0	6.4
Gypsum products	360.3	1.0	9.6
Hand tools	381.2	0.7	3.4
Hand tools, power driven	234.6	−0.6	2.5
Industrial furnaces	395.2	0.9	3.4
Integrating and measuring instruments	233.3	0.3	1.2
Internal combustion engines	348.2	0.3	2.7
Lubricating oil	N/A	N/A	N/A
Lumber millwork	311.7	−0.1	−0.3
Material handling equipment	295.5	−0.2	1.0
Metal containers	361.3	0.0	1.1
Metal mill shapes (nonferrous)	308.9	0.9	−1.2
Metal tanks	305.5	0.1	−0.2
Motors and generators	349.7	−0.4	−0.1
Motor trucks	308.4	−1.3	4.9
Office and store equipment	154.5	0.8	0.7
Paperboard	264.1	−0.2	−8.0
Paper boxes and shipping containers	266.3	0.0	−3.4
Paper office supplies	236.6	0.1	−3.3
Paint	279.4	0.4	0.4
Plastic resins	297.1	0.1	2.7
Precision measuring tools	265.1	0.0	3.2
Pumps and compressors	357.2	−0.1	1.0
Refractories	373.0	0.1	1.9
Rubber belts and belting	339.6	1.0	−1.2
Scales and balances	230.5	0.7	−1.4
Steel products	347.8	−4.2	−4.6
Switchgear	281.9	0.1	0.9
Textiles, synthetic fibers	151.1	0.6	−4.1
Textiles, gray fabrics	151.6	0.0	−1.4
Tires and tubes	235.7	0.0	−1.1
Transformers and power regulators	233.0	−0.1	1.0
Welding equipment	298.7	0.5	2.3
Wire and cable	206.3	0.5	2.0

Industrial prices

(Index: 1967 = 100)

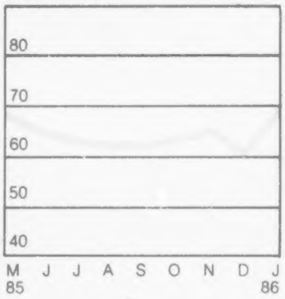


Source: Bureau of Labor Statistics

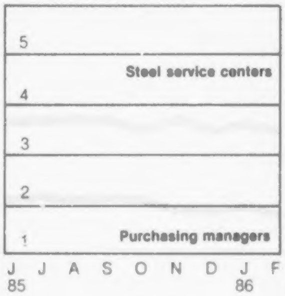
BUSINESS DATATRAK

Steel

Operating rates

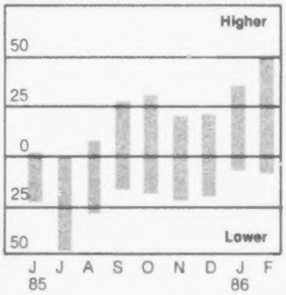


Inventories
(Months supply on hand)

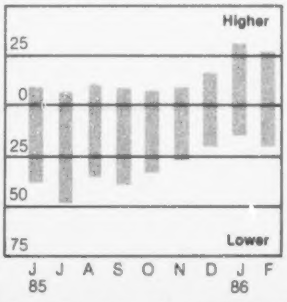


Demand
(Percent of respondents)

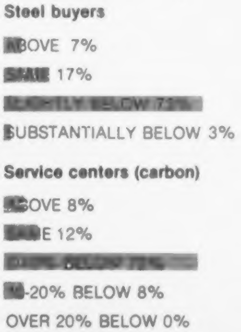
Service centers incoming orders



Steel buyer purchase



Import prices
(Compared to domestic)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

Note that the hefty 4.2% drop in steel mill products is basically a statistical aberration—reflecting the fact that mills have just completed a restructuring of their lists, bringing them down more in line with transaction tags which have not moved much in the past month or so.

STEEL SCENE

Better business spills over into steel market

The unexpectedly good turn in business is rippling into the steel market. But gains are likely to be modest.

Only 22% of the PMs queried by the NAPM Steel Buying Committee see an increase in incoming steel receipts over the next three months—not much more than the 20% who feel that some decline may be in order.

On another front, about half the distributors responding to the latest Steel Service Center Institute survey see near-term gains in orders, but those gains could slacken off over the longer term.

SSCI president Andrew G. Sharkey feels that for 1986 as a whole, the industry will do little more than hold onto last year's gains—with total shipments again coming to just a bit over 21 millon tons.

As Sharkey puts it, "We just don't see a repeat of the growth experienced in 1985. Rather, we expect average shipping rates to continue at or near last year's peaks."

It's a theme echoed by some individual service centers, as well. John Jorgensen, of Earle M. Jorgensen, suggests that 1986 will "probably be a fairly flat year." He adds that while January price hikes by steelmakers initially looked as if they would hold, there is now some doubt about their strength.

Responses to the question of what service centers expect replacement costs to be six months from now also confirm no expectation of major price boosts. While all say they'll be up, the vast majority (74%) put the increase in the modest 2-5% range.

Of much more concern to distributors is what the impact is likely to be on the bottom line. Sharkey notes that profits last year did not keep pace with record volume—primarily as a result of declining inventory values and a highly competitive marketplace. Achieving a satisfactory return will be the industry's top priority in 1986, he says.

The new steel surveys also reveal some other interesting trends:

- General business: The near-term outlook seems pretty clear-cut. Specifically, the percentage of both distributors and buyers who see better activity ahead outnumbers the percentage seeing declines by a wide margin.
- Inventories: Buyer stocks have dropped to just 1.83 months, the lowest level in almost two years. And service centers are maintaining their holdings at the low 3.6 month level.

Despite this, both groups are not quite satisfied that paring is complete. On the service center front, 37% feel that their stocks are still too high—far outnumbering the 3% who think they're too low. The same is true of buyers where the comparable figures are 21% "too high" and 0% "too low."

- Availability: Nothing to worry about here, except in selected products like coated and hot-rolled sheets.
- Import prices: Lower foreign tags on imported steel seem to be major factor in the steel equation. Some three out of four buyers say foreign steel is priced under comparable domestic levels, with 3% dubbing the differential as substantial.

Service centers who split out carbon and stainless tell much the same story. In the carbon sector, 80% say foreign steel is cheaper, with 8% putting the price break in the 11-20% range.

And the competitive pressures seem even more pervasive in stainless where an impressive 93% report lower foreign quotes with 36% estimating the advantage in the 11-20% range.

Given all the above, it is little wonder that few are contemplating any drop in steel imports—despite some tightening of quotas in recent months. In fact, it's pretty much the status quo for service centers, with only 13% planning less dependency on imports offset by a similar 13% who anticipate further dependency.

Armed with this kind of information, SSCI's Sharkey sees only a token drop in overall steel imports this year with overseas tonnage edging down only slightly and the import share of the market holding in the still high 22.5-23% range.

PROCUREMENT STATUS

No tightening in an improving economy

There are still no signs of any supply tightening in spite of a business pickup that has seen industrial demand advance for four consecutive months.

One reason: The increases in factory activity have been gradual. New capacity, which is still coming in at a 3% annual rate, has just about offset the increased output, thus keeping average operating rates at the relatively low 80% level.

Then, too, steady increase in supply from overseas sources also helps. Current forecasts call for gains to continue through the current year—even with a somewhat weaker dollar.

Whatever the reason(s) for today's "buyers' market," ***PW***'s latest procurement status survey suggests that there are no indications of any significant changes in the offing.

Our exclusive leadtime index, for example, registered only a modest 51 last month (just 1% above the neutral 50 mark). That's a remarkably stable performance for this early in the year when normally this barometer shows some seasonal rise.

The same picture is signaled by the NAPM speed-of-delivery report. Specifically, 5% of the buyers reporting have recently experienced slower deliveries but this is effectively offset by a similar 5% who reported some improvement. More important, the vast majority (90%) are experiencing no change.

Other reassuring signs:

- The absence of items on the short-supply list—not one single problem area cited for 12 consecutive months.
- Buyer stocks continue to decline. 25% currently report lower stocks and only 15% report higher stocks.
- Forward commitments that remain exceptionally low. More than one out of five now buy on a hand-to-mouth basis and another 40% find it unnecessary to commit more than 30 days in advance.

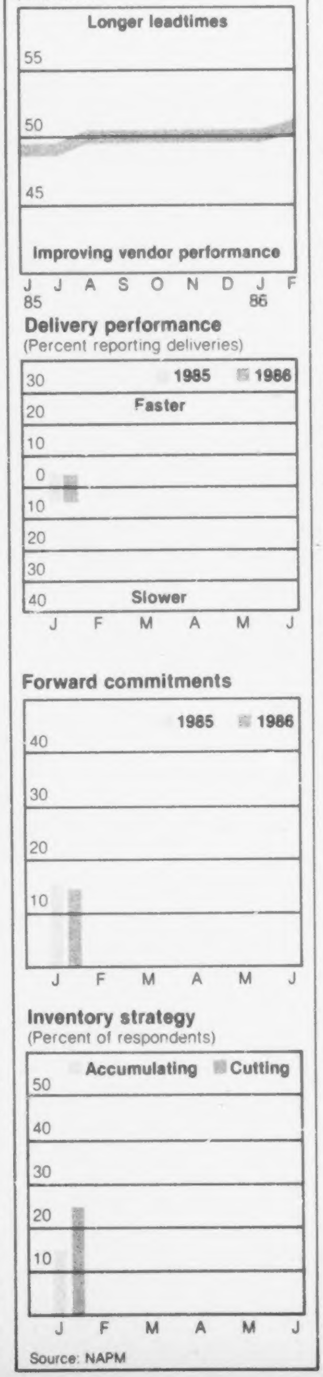
About the only disquieting note on the buying front is that the softer price trend of the last few months seems to be leveling off. The number of buyers reporting higher prices now offsets the number noting lower quotes.

But this, too, can be regarded as a seasonal effect. Typically, most vendors use the first part of the year to post price increases—many of which wash out as the year wears on.

Monthly procurement status report

Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance



Source: NAPM

Leadtimes and availability

Chicago: A mixed picture here. Longer waits for chrome, chemicals and surfactants (½-1), special brass tube (8-12), and softwood framing (1-2). But more than offsetting are drops in batteries (10-14), cold-rolled sheet (5-6), aluminized sheet (6-7), brass and copper sheet (1-2), special copper tube (6-8).

Cleveland: Reduced leads are reported on waterproof papers (4-5 weeks), 2-ply fiber drums (2), steel drums (on demand), and polyethylene and PVC resins (2). Plastic packaging materials are moving out to 3. Unchanged are softwood lumber (1-3), skids (1-3), and alloying materials (on demand).

Los Angeles: A rather quiet month—with these weekly leads: Galvanized steel (6-8), aluminum tubing (6-8), grey iron castings (8-10), brass castings (4-6), electro-mechanical devices (6-8), pumps (10-12), domestic fasteners (4-6), stainless coil (12-14), and standard valves (10-12).

BUSINESS DATATRAK

Houston: High pressure heat exchangers have moved in a month (to 5-8). Unchanged are motor control centers and power transformers (3-7 months), metals (1-4), centrigual compressors (10-12), pumps (4-7), corrugated cartons (2), galvanized steel coils (2 wks), and 4-color process printing (2-6).

Philadelphia: Metal film resistors have moved out significantly—from 8-10 weeks to 14 weeks. And while CMOS ICs are steady (off the shelf to 10-12 weeks), some modest stretchout is expected. Other electronic components remain relatively unchanged. But steel items could be out a bit by mid-spring.

Pittsburgh: Corrugated and folding box waits continue at 3-4 weeks. Status-quo for all types of drums (1), multiwall paper bags (6), waterproof papers (8), plastic packaging materials (2-3), lumber (3-4), steel strapping (2-3), paint (4-5), polyethylene and PVC (5-6), and alloying metals (2).

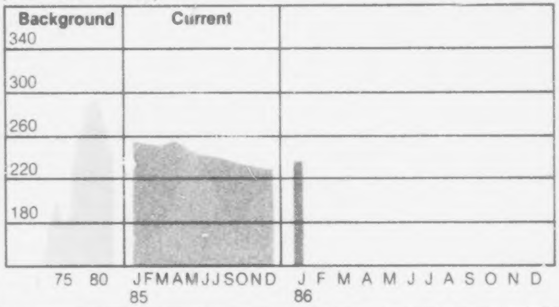
Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	5½	7½	6½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	2½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	7
H-R Bars (Chgo)	3	3	3
Cold-Drawn Bars (Phil)	5½	5½	7
Galvanized (LA)	7	7	13
Galvanized (Chgo)	7	7	7
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	7
Grey Iron Castings (LA)	9	9	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	13	13	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	11	11	15
Motors (Phil)	10	10	11
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	10
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	10
Resistors, Wirebound (Phil)	5	5	8
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	1½
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	1
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Napthalene (Chgo)	2	2	2
Paint (LA)	1½	1½	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2½
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2	3	3
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	3½
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	2½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	11	11
Aluminum Plate (Chgo)	10	10	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	9	9	11
Brass Castings (LA)	5	5	7
Brass Rods (Chgo)	6½	6½	3
Brass Sheet (Chgo)	4	4	1
Brass Tube (Chgo)	10	7	10
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	3
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	52
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	5	5	5
Fasteners, Std. (Phil)	1½	1½	2
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	28	33	39
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	2½	2½	2½
Pumps (Hous)	24	24	30
Pumps (LA)	11	11	13
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

Raw material price barometer

Latest month	237.6
Month before	235.0
Year ago	255.8

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	25.10
Steel, bars, divd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt.	31.00	31.00	29.25
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	25.15	25.15	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.563	0.533	0.510
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.35
Brass, red, 85%, [sheet], lb.	1.30	1.32	1.28
Brass, yellow, [sheet], lb.	1.25	1.27	1.23
Cadmium, ton lots, lb.	1.00	1.00	1.25
Copper, electrolytic, wire bars, refd., lb.	0.67	0.69	0.65
Copper sheet, over 24 in., lb.	1.39	1.41	1.37
Lead, common, N.Y., lb.	0.180	0.185	0.190
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	250.00	269.00	310.00
Molybdenum, oxide, dealer lb.	2.70	2.55	2.90
Nickel, cathode, dealer lb.	1.88	1.95	2.27
Platinum, dealer, oz.	353.00	364.00	274.00
Silver, N.Y., oz.	5.91	6.05	6.10
Tin, Straights, N.Y., lb.	N.A.	N.A.	5.65
Zinc, Prime West, East St. Louis, lb.	0.34	0.34	0.43
Zinc, die casting alloy, No. 3, lb.	0.415	0.415	0.495
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.15	16.23	16.25
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	495.00	495.00	495.00
Wrapping paper, std. distributor cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.236	0.255	0.383
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.045	1.045	1.030
Cotton middling, 1", N.Y., lb.	0.600	0.595	0.598
Printcloth, 48", 80x80, N.Y., spot. yd.	0.66	0.72	0.71
Army duck, 37", 13 oz., yd.	1.50	1.56	1.96
Blended printcloth, 64", 78x54, yd.	0.750	0.800	0.740
20s combed yarns	1.95	1.95	2.12
Wool tops, N.Y., lb.	3.60	3.60	3.60

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	0.395	0.455	0.455
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.05	1.20	1.17
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.58	0.58	0.58
Formaldehyde, USP, 37% [12% to 15% meth.], tanks, lb.	0.106	0.106	0.106
Glycerine, synthetic, tanks, lb.	0.91	0.91	0.86
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.52	0.52	0.54
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.270	0.270	0.305
Polyethylene resin, low density liner film grade (market price), lb.	0.310	0.310	0.290
Polypropylene, homopolymer grade (market price), lb.	0.350	0.350	0.340
Polystyrene, general purpose grade (market price) lb.	0.350	0.340	0.350
Polyvinyl chloride, pipe grade (market price), lb	.260	.250	.290
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.26	0.26	0.35
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb.	0.73	0.73	0.69
Xylene tanks, gal.	1.36	1.36	1.26
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	303.90	306.40	301.70
Lumber, 2x2, pine, mbf, cl	294.95	291.95	300.40
Plywood, plyform, ¾", msf, cl	567.95	582.15	563.00
Plywood, ⅝", msf, cl	377.00	380.36	375.10
Cement, bulk, ton, tl	65.92	64.98	64.46
Sand, ton, cl	6.41	6.41	6.20
Ready-mix concrete, 3,000 psi/cu.yd., 15 cu. yd.	47.94	48.12	47.66
Crushed stone, 1½", ton, cl	7.82	7.86	7.52
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.82	0.82	0.79
Gypsum sheathing, ½"x1"x8", msf, tl	207.69	208.69	205.44
Brick, common, per thousand, tl	184.06	184.61	179.15
Asphalt paving, AC-20	174.14	176.14	173.17
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.14	7.14	6.97
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	14.00	20.00	26.25
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	22.50	27.00	31.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.625	0.743	0.725
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.578	0.708	0.699
Heating oil, No. 2, Chi., bulk, gal.	0.630	0.773	0.730
Heating oil, No. 2, N.Y., bulk, gal.	0.545	0.768	0.808
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	0.520	0.753	0.770
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.430	0.430	0.388
SCRAP MATERIALS			
Steel, No. 1, hvy., divd., Pitts., ton	77.00	74.00	87.00
Steel, No. 1, hvy., divd., Chi., ton	76.00	73.00	81.00
Copper, No. 1, East, wholesale buy, divd., lb.	0.575	0.580	0.560
Copper, No. 2, East, wholesale buy,	0.505	0.510	0.475
Brass, red, East, wholesale buy, divd., lb.	0.535	0.540	0.520
Brass, yellow, East, wholesale buy, divd., lb.	0.290	0.290	0.340
Alum., old sheet/cast, E., wholesale buy, divd., lb.	0.355	0.320	0.335
Alum., mixed clip., E., wholesale buy, divd., lb.	0.370	0.345	0.350
Zinc, old, East, wholesale buy, divd., lb.	0.150	0.110	0.140
Lead, clean solids, East, wholesale buy, divd., lb.	0.100	0.100	0.110
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	10.00	8.00	15.00
Paper, old corrug. box, dlr., N.Y., ton	10.00	6.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.120	0.080	0.120
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.14	0.14	0.34

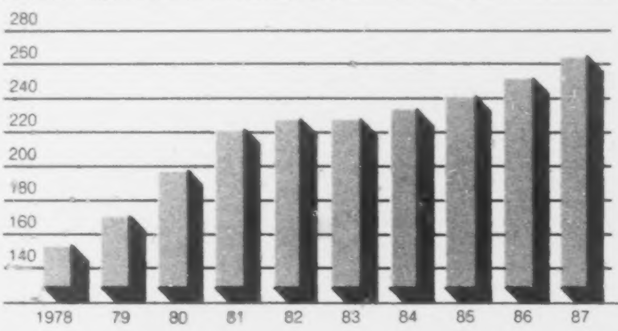
[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Quarterly transportation forecast

Rates riding in the slow lane

PurchasingWorld freight rate index

(1972 = 100)



Increase over previous year	
1978	6.0%
1979	12.6%
1980	14.9%
1981	10.7%
1982	3.7%
1983	2.0%
1984	0.5%
1985	2.4%
1986	4.0%*
1987	4.8%*

*Estimated

Some good news about freight rates for transportation buyers: A combination of overcapacity, competitive infighting, and restrained cost increases should limit this year's overall price gains to about 4%, says a forecast prepared exclusively for *PurchasingWorld* by Wharton Econometrics.

This new estimate is actually 0.2% under projections made late last year (*PW* 12/85, p. 52) and an even larger 0.4% drop from the level projected just six months ago.

And these estimates may well have to be pared again because the forecasts do not take into account all the ramifications of the recent drop in fuel prices—a drop which, if it persists, could have a further downward impact on truck and airfreight costs.

These numbers are also average figures and, therefore, tend to mask some of the deals transportation buyers have been able to swing in return for long-term contracts. Some transportation buyers say they are able to hold the line at last year's freight rate levels.

- **Rail:** Competitive pressures are being heightened by a 4.1% drop in ton-miles last year—wiping out a fair portion of 1983's 11.6% advance. This year isn't looking too good either, with ton-miles expected to remain fairly flat.

Part of this can be attributed to modest gains in coal (rail's top customer) and lackluster grain exports as overseas buyers rely less on U.S. purchases. Another factor could be the increasing encroachment of imported goods into the U.S. market. Considering that these goods are not funneled through as many stages of the production and sales chain as domestic goods—the negative impact on freight volume is obvious.

The resulting poor demand will again tend to limit rail rate increases—though the 4.2% increase envisioned for the current year is above last year's 3.5%. And even next year, when some slight acceleration is expected, the gain is pegged at only 4.5%.

- **Trucking:** Activity slowed down in 1985 for many of the same reasons that apply to rail freight. Intercity ton-miles dropped off 1%—again in sharp contrast to the previous year's nearly 10% increase. While some modest pickup is expected this year (maybe 5% or so), cut-throat competition should limit rate hikes again.

Wharton economists put the average 1986 rate advance at 4.2% (the same as for rail). But they hasten to add that this could prove to be a bit high if fuel costs continue to fall.

- **Barge:** The industry had a rough 1985, as reduced demand and overcapacity continued to plague the waterways. Great Lakes traffic has been flat and is likely to remain so, as grain and coal shipments continue to be disappointing. Overcapacity is highlighted by the fact that 30% of the dry cargo fleet and 30-40% of the tank barge fleet are currently laid up.

Not surprisingly, barge rates show the most modest increases of all modes in 1985 (2.2%). And they are likely to stay on the low end for the next few years, with 1986 and 1987 increases put at only 3.5% and 4.1%.

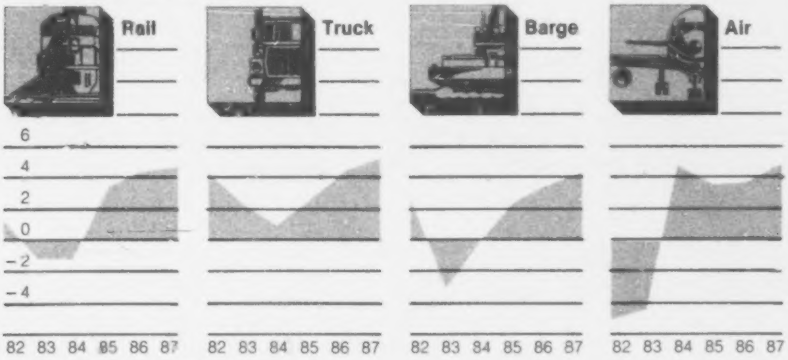
- **Air:** The industry has come off a mixed year, with a 10% increase in passenger demand offset by declines in both domestic air freight (9%) and international air freight (4%).

On the other hand, there are some exceptions—notably small package and express mail where unit shipments over the first six months of 1985 jumped 25%. But competition here is severe and likely to remain so.

This price infighting is also making it hard to boost overall air cargo rates, particularly with demand below expectations. **PW**

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasts

More to imports than bargains

The U.S. dollar may have weakened a bit, but you would never know it by the way imports continue to come in at a record rate. And all signs point to even more in the coming months.

Buyers say imports are still bargains, with quality often as good or better than their American counterparts. This attitude, determined by a new *Purchasing World* nationwide survey of top purchasing execs, is summed up by a Midwestern purchasing VP who says: "Importing is now a necessity. Everybody's doing it."

To reinforce his point, he notes that offshore buys now permeate the economy, making up almost 11% of overall demand in this country. That's nearly double the rate of just 15 years ago.

Here's a more detailed breakdown of what purchasing executives have been telling *PW*:

- **Recent import price trends:** The weaker dollar has yet to have significant impact. Nearly two of three respondents report unchanged or lower prices compared to a year ago.
- **The import price advantage:** The average price break is pegged at 14%. And more than 30% of the respondents say the savings average out at 20% or higher.
- **Best bargains:** Among the product lines listed are electronic components, office equipment, steel mill products, metal alloys, stainless castings, fasteners, bearings, valves, batteries, motors, textiles, tires, selected chemicals, and machine tools.
- **1986 demand:** Nearly two of three respondents anticipate a stepup in incoming shipments—far outweighing the 21% who see no change and the 13% who feel that imports could drop off a bit over the current year.

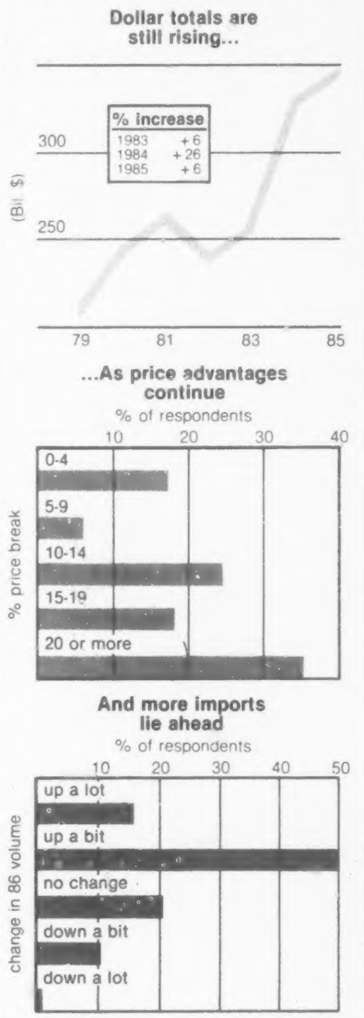
The decline in the value of the dollar is downplayed in these estimates. Most respondents don't think it will decline much under the 15% drop over the past year. They note that this depreciation has not had much of an impact because overseas profit margins were overinflated when the dollar was riding high. Hence foreign sellers have been able to absorb the effect of a weaker dollar without making much upward adjustment in their asking prices from American buyers.

Another indication that foreign producers are not about to give up their lucrative U.S. market is that 40% of PMs say their overseas suppliers are more active now than in the past in soliciting new business.

Judging from buyer comments, these overseas vendors are not having too much difficulty drumming up interest. Buyers quote several reasons—in addition to the price factor—for going the foreign route:

- Many buyers say that with quality being a prime consideration, they find overseas material often superior to domestic offerings. One PM tells of small gas engines which offer significant performance advantages over U.S. engines, as do Japanese diesel engines in the 16-30 HP range.
- Another factor is the need for an overseas backup source, or where the domestic supply is either inadequate or nonexistent. One buyer notes, for example, that British steel mills will roll special sections that U.S. mills won't touch because of the small volume.
- Then there is the bargaining leverage angle. One PM says that while he doesn't buy that much from foreign vendors, he uses the lower prices of imports to help keep the lid on domestic quotes.
- Several respondents also note that they are in the process of building up close relationships with offshore sources. Because of this, many prefer to bypass brokers and deal directly with the overseas seller.

Imports: Still Going Strong



Source: PW Survey, Commerce Dept.

One buyer taking this tack points out that "We are in an international market place. If a foreign source can exhibit an advantage as a quality supplier, he will receive a percentage of our business." **PW**

APRIL 1986

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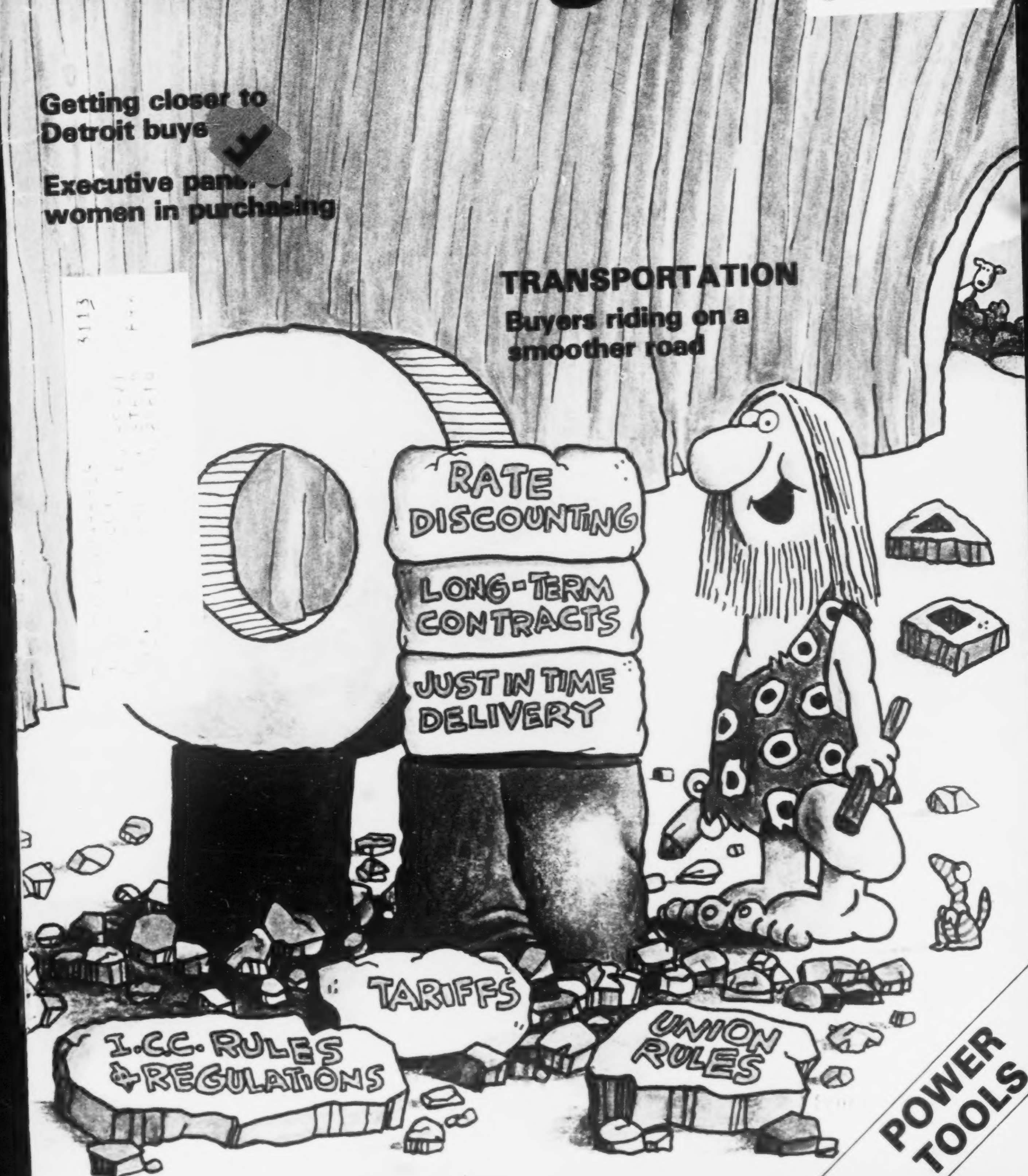
Getting closer to Detroit buyers

Executive panel of women in purchasing

TRANSPORTATION

Buyers riding on a smoother road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Vol. 30 No. 4 April 1986

Special report: Transportation

39 Ton-miles to go before any real hikes
PW readers don't see much chance of shipping rate hikes above the 3% level this year, as buyers continue to call the shots.

41 Buyers riding a smoother road in a freer market
For buyers, the news is still very good. Keener competition is forcing carriers to expand service, hold the price line, and develop better relationships with shippers.

74

Features

30 A startling development in New Hampshire
Watch out for those delivery receipts. A recent decision by a New Hampshire court put a new wrinkle in the interpretation of contracts.

32 Unmasking the software systems buy
Don't take anything on faith when buying software or computer systems—there are too many pitfalls. Here are some sound principles for dealing with this difficult buying decision.

52 There's energy behind the restraint
The sharp drop in oil prices is pulling the inflation rate down with it, according to this latest report on key economic groupings by Data Resources Inc.

57 *PW* forms Executive Panel of Women in Purchasing
Panelists will help *PW* develop topics of special interest to the purchasing community. Nominate a panel member—see story for details.

60 Getting closer to Detroit buyers
Tech centers are sprouting up around the Detroit automakers to give better service to their customers—and it is changing the way purchasing does its job.

68 How Nordson purchasing does it
Creative use of high-tech tools help make Nordson's purchasing department a model worth looking at.

74 Portable power tools—Imports nibbling away at domestic market
The lines are drawn in the battle to capture a piece of the $2.1 billion U.S. power tool market. (Also featured is a market checklist of developments in the industry).

Cover art by Roger Bollen

"Welcome to the NAPM convention in Atlanta"

87

Departments

4 PW Pointers
6 Publisher's message
8 PW Predicts
16 Business Datatrak
36 Transportation Report
71 For the Record
80 PW Office '86
89 Sample Pak
94 Pinkerton on PCs
97 New Products
100 Ad index
100 Classified
101 Catalogs
102 Crystal Ball Contest

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2/6

PW PREDICTS

Robert S. Reichard, executive editor

Inflation slips on the oil patch

New computer analyses confirm that the recent price slide in petroleum costs will dampen inflation significantly—reducing not only the overall rate of increase, but also in key specific industrial sectors.

Take a look at the macro picture first. Wharton Econometrics now predicts that producer price averages will rise only 0.9% this year. That's almost half of the 1.6% predicted just a few months ago. And the downward adjustment now predicted for 1987 is even bigger. The Philadephia-based economic consulting firm's new estimate of 1.9% for next year is nearly a full point under the 2.8% pre-oil-cut projection.

As expected, the impact on individual products will be uneven. The Wharton breakdown suggests that the biggest deceleration will be in the energy sphere, where a previously projected 1.4% advance for 1986 is now turning into a near-1% decline. And a similar decline is anticipated in the petroleum-dependent chemical industry.

On the other hand, the substantial improvement in demand seen for other sectors as transportation equipment, machinery, and textiles and apparel may well offset the downward tug of lower oil tags. That's why Wharton's equations point to fractional price acceleration in all three of these areas.

It should also be noted that the above inflation estimates assume an $18/bbl quote through 1987. If petroleum tags average out below $18 (some energy analysts do not think these quotes will rebound very quickly from current under-$15/bbl levels), then general price deceleration could turn out to be even more substantial—both for the current year and for 1987.

And Wharton isn't alone with this rosy forecast. Projections by Data Resources Inc. (DRI), another big economic consulting firm supplying forecasts to *PW* on a regular basis, tell much the same story. DRI sees overall industrial producer prices rising only about 1.1% this year, and 2.8% in 1987.

DRI's more detailed commodity forecasts, carrying into 1988, are equally optimistic. Only one of the 28 specific categories analyzed is expected to sport more than a 5% price increase this year.

Non-commodity cost pressures are also likely to slacken because of the the oil factor. Interest rate declines have already been set in motion, with average borrowing costs over the current year now expected to be about one point under what they might be otherwise.

The oil impact will probably spill over into the labor arena also. Specifically, lower crude oil will quickly translate into a smaller cost-of-living index rise—thereby reducing pressure for big new wage hikes.

Under the new ground rules, hourly earnings increases are now put at only 3% or slightly higher.

Computers

Computer prices are heading for more sharp declines this year and probably for the rest of the decade.

A new Computer and Business Equipment Manufacturers Association (CBEMA) forecast indicates that microcomputers (those carrying suggested retail prices ranging from $1,000 to $15,000) will decline another 16% this year—bringing the average quote down to $2,995.

This is on top of the dramatic declines of the past decade—when the average machine tumbled a whopping 76%—from $15,000 in 1975 to only $3,553 last year.

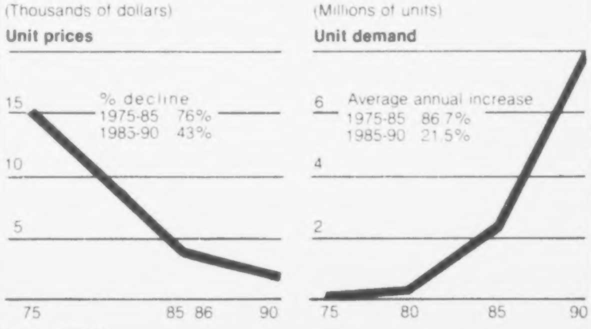
And that isn't the end of the line. By 1990 further declines will drop price averages to only $2,035—32% under last year's levels.

Demand is also expected to continue showing strong gains. The CBEMA study puts average annual gains over the 1985-90 period at 21.5%—about five times as fast as the general economy is expected to grow. In volume, that means 3.1 million micros will be shipped this year—a figure which could grow to over eight million by 1990.

The 1986-90 average annual advance is somewhat under the phenomenal 86.7% average annual growth rates of the past decade, but some decline has to be expected as the base to which you compare growth gets larger and larger.

A better indication of ever-increasing acceptance: Some 27 million microcomputer units will clear the market between 1986 and 1990. That is more than five times as may as were sold during the past four years.

Micro computer market trends



Source CBEMA

PW PREDICTS

Copper

CURRENT SITUATION: The red metal still seems unable to sustain a rally. Prices have been zig-zagging in the 65-70¢/lb range for over a year now. **Major depressants: sluggish demand and continued strong production by Third World countries** who control about 40% of the Free World supply. But whatever the reasons, U.S. firms are taking it on the chin—tags remain several cents under production costs and 40% of all U.S. mines are shut down.

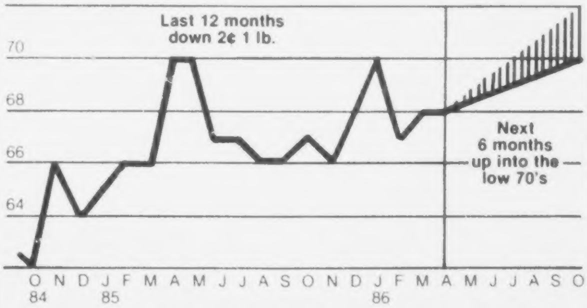
DEMAND: Things are looking up—thanks to the oil price slide which could boost domestic use 1-2% this year. Money previously earmarked for gasoline and home heating oil will now be funneled into increased demand for autos, appliances, and other items requiring copper. Look for a small gain in Free World demand for the same reason. **Long-term demand, however, looks less than buoyant as fiber optics and increased use of aluminum radiators cut into the metal's markets.**

SUPPLY: Overcapacity is likely to remain pervasive, but trends suggest a better near-term balance as aboveground stocks decline. Increasing dependence on overseas supply is also likely—domestic output of primary refined copper is expected to be off about 4% this year. Consequently, imports will continue to increase and could account for more than 35% of consumption by the end of the decade.

PRICE OUTLOOK: Improved demand and smaller stock overhangs suggest some near-term firming. But boosts are likely to be quite modest. A recent government forecast calls for a 4% advance for 1986 as a whole. Look for a low-to-mid 70s quote by fall or winter. **Longer term, the prognosis is for very little firming, for as tags rise, shut down facilities are likely to come back on stream.**

Producer copper prices

(1¢ lb)

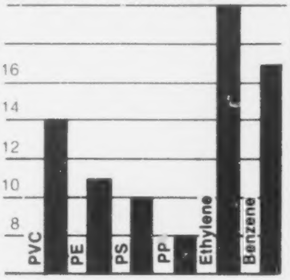


Steel

Sheet prices are firming, as buyers become increasingly nervous about an August strike. And more boosts are possible—with this key steel product group scheduled to move up another 3% in early May. But many big users protected by long-term pacts will escape the new moves. Service centers are expected to bear most of the upward thrust. Elsewhere, hot-rolled bar has moved up $25-30/ton. But major weakness has reappeared in oil country tubular goods as falling demand for oil drilling drops prices as much as 75% under official list levels.

Plastic resin prices

(% decline end of 85 to 88)



Source: DRI

Plastic resins

The sharp oil price drop should put strong downward pressure on most commodity resins over the next few years. Thus a new DRI study (which assumes that oil will finally settle around $18/bbl) sees these price declines by 1988: PVC (-14%), polyethylene (-11%), polystyrene (-10%), and polypropylene (-8%). These figures are further premised on even bigger drops in key feedstock prices—ethylene (-20%) and benzene (-17%).

Aluminum

The slow price upcreep of recent months is continuing. Producer ingot now goes for 60¢/lb—with 6063-type also up 2¢/lb (to 68¢/lb). Other bullish signs would have to include, 1) a recent jump in the incoming order rate, 2) Free World usage which will outstrip demand for the second consecutive year, and 3) the drop in global stocks from 2.6 million metric tons a year ago to under 2.2 million today. Add in some nervousness about a possible strike this spring and prices could inch up another few cents. But that's about it—any big increase could lead to potline shutdowns.

Electronic components

Some firming is noted in the 256K and 64K EPROM market with quotes up an average of 25% from November 1985 levels. One big firm, for instance, now asks $2.50 for its 64K device (vs. $2 in late 1985) and 256K types are moving at $5 (vs. $3 a few months ago). No increases, however, have been announced on the more powerful 512K models. In the meantime, overall demand for semiconductors is looking up. In-

Paper and products

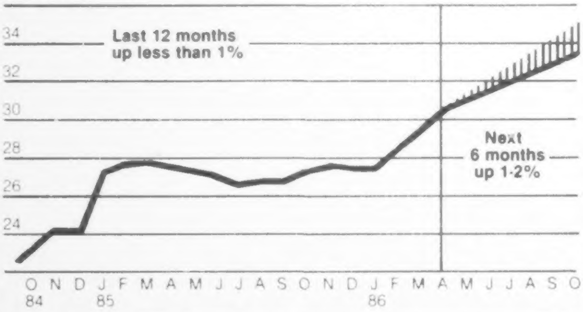
CURRENT SITUATION: Markets are beginning to firm after last year's sluggish performance. A stronger 1986 is suggested by growing backlogs—as the pace of incoming orders quickens. Corrugated shipments look better—early 1986 figures are up almost 5% above year-earlier levels. **Inventories have dropped and prices are edging higher.** Producers have recently posted boosts in 1) market pulp (up $30-50/ton), 2) linerboard (up $30/ton to $290/ton), and 3) many commodity grades of white paper.

DEMAND: An improving general business outlook promises gains in most sectors. Total paper and board production could rise 2.5-3% this year—to nearly 69 million tons—thanks to a decline in imports and some customer inventory replenishment. Product-by-product projections: corrugated boxes (up 2-2.5%), folding boxes (up 2-3%), setup boxes (up 1-2%), uncoated free sheet (up 4%), and coated paper (up 3%). **Overall long-term prognosis is fairly bullish—look for average yearly advances of 2.5-3%.**

SUPPLY: There should be enough to go around. The American Paper Institute projects that modest demand increases will be largely offset by a 2% capacity increase this year and a 2.5% increase in 1987. Operating rates will remain under preferred levels—with these projected 1986 rates: unbleached kraft linerboard (91%), recycled paperboard (86%), coated papers (87%), uncoated groundwood (94%), and uncoated free sheet (92%).

PRICE OUTLOOK: More-than-ample supply should limit near-term advances. Overall paper and paperboard increases should be up only 1-2% over the next two quarters—**with year-end levels running 1.5-2% above late 1985 levels.** One exception is lightweight coated papers where prices should remain the same because of capacity additions.

Paper & Product Prices
(Index 1967 = 100)



Stat, a major consulting firm, estimates that dollar sales will increase this year as follows: 2% (1Q), 7.8% (2Q), flat (3Q), and nearly 10% (4Q).

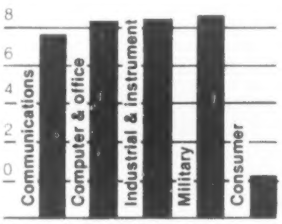
Zinc

Lists are just the starting point for negotiation as some buyers pay less than 30¢/lb for their metal in recent weeks. One reason: Many of the publicly acclaimed production cutbacks of late last year have been all but forgotten. The current glut is spotlighted by recent estimates that put worldwide refined metal output at 4.93 million metric tons in 1985—well above consumption which is estimated at 4.65 million tons for the same period. All of the above and expectations of only a modest 3% increase in U.S. consumption (to 915,000 short tons) should keep prices under pressure.

Electronic equipment

A tolerably good year seems to be shaping up on the demand front. So says Henderson Ventures, a major electronics consulting firm. Its forecast: Overall sales should increase about 7.9% this year (about one percentage point above 1985) with slightly larger increases seen for three key sectors: 1) computer and office, 2) industrial and instrument, and 3) military. Next year promises to be even better. A big 14%-plus gain in the computer and office segment of the market could push the overall advance to nearly 11.4%.

Electronic eqpt demand
(% increase in 1986 sales)



Source: Henderson Ventures

LDPE

A recently posted 3-4¢/lb advance in low- and linear low-density polyethylene (LDPE) is meeting with only limited market acceptance, primarily because of falling feedstock costs. Result: Transaction prices are up only 1¢/lb with the liner grade LDPE fetching only about 32-33¢/lb and LLDPE (butene type) only 29-30¢/lb. Demand isn't moving up all that fast either with only about a 3-4% increase anticipated for the current year.

PVC

A second round of 1986 price hikes (pushing market quotes up another 3¢/lb) could be in trouble. Reasons: rising pipe inventories. As such, prices are likely to remain in the current 29-30¢/lb range for at least another month or two. Also suggesting restraint over the longer pull are lower feedstock costs and less-than-sensational demand gains. On the lat-

PW PREDICTS

Dollar's dip pushes import tags

The gradually weakening dollar is finally beginning to affect import prices. A new government rundown finds that costs of incoming goods jumped 1.8% in the last three months of 1985. (see chart).

The biggest increase occurred in the transportation and capital equipment sectors where price averages rose a significant 3.6% from third quarter 1985 levels. The reason is that a substantial portion of imported goods in this category came from countries whose currencies have appreciated the most against the dollar.

The largest price increase (4.5%) occurred in road vehicles and parts. And office machinery, a category which experienced substantial price drops over the previous year-and-a-half, jumped by 3.8%.

Other significant advances were recorded for metalworking machinery (4.1%), industrial machinery (3.9%), specialized machinery (3.3%), and electrical machinery (2.3%). Telecommunications equipment remained relatively unchanged as price decreases in parts offset price increases in equipment.

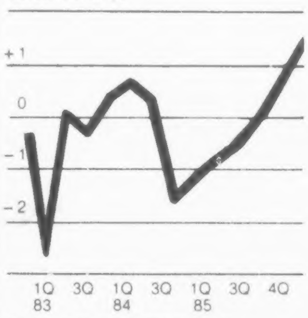
Miscellaneous manufacturing—including professional, scientific, and control instruments—jumped 3.6%. Also up—by 4.2%—were photo equipment, optical goods, and watches. Smaller gains were noted for footwear, furniture, and travel goods.

The weaker dollar has also halted the slide in crude material prices. They were virtually unchanged during the latest three-month period. That's in sharp contrast to the declines of the previous quarters which have dropped average quotes in this sector close to 8% under year-ago levels.

Fuel and related products inched up on the survey only because government analysts hadn't yet factored in the crude oil price tumble. When the next survey is taken, it will reflect a major drop here.

Import price trends

Overall prices are rising
Percent change



Source: Bureau of Labor Statistics

Particularly in these areas
(% increase over last 3 months)

Textile	1.3
Fasteners	0.5
Electrical motors & gen.	2.8
Textile machinery	3.5
Printing machinery	6.7
Metalwork machinery	4.1
Industrial machinery	3.9
Pumps & compressors	1.6
Mech. handl. eqpt.	7.3
Bearings	1.1
Office machines	4.7
Electrical machinery	2.3
Autos	5.0

ter score, average consumption this year is expected to rise by only 3-4%—thereby keeping operating rates in the relatively low 80% range.

Cotton

A new government program (assuring that domestic cotton will be competitive with the world price) could knock at least 10¢/lb off the current 60¢/lb-plus quote by next fall. The expected downtrend is also beginning to put pressure on manmade fibers and a broad range of fabrics. Thus, 1) overall manmade fiber prices now run some 4% under year-ago levels, and 2) convertors are holding back on grey goods purchases, hoping that lower fiber costs will force a decline on the fabric level by as early as late spring or summer.

Natural gas

Look for falling oil tags to put new downward pressure on competing gas. Indeed, if oil remains at current levels, the basic pipeline gas purchase price could drop down to $1.93 per thousand cubic feet this year, off a resounding 25% from 1985. And spot prices could drop even lower--to near $1.65. A persistent glut adds to the overall weak price outlook. Specifically, current use is put at only 18 trillion cubic feet a year, about 2.5 billion under capacity. Moreover, there's the added supply from Canada where producers are said to be formulating an aggressive pricing strategy.

Cobalt prices
(cents/lb.)

1977	$5.58	1982	$8.56
1978	$11.53	1983	$5.76
1979	$24.58	1984	$10.40
1980	$25.00	1985	$11.25
1981	$19.73	1986	$9.50

Cobalt

Prices are dropping—the metal has moved into the low $10.50/lb range, some 9% under year-ago levels. Nor is that the end of the line. By-product producers do not want to hold onto inventories and the market seems headed for a major oversupply situation. In any case, be prepared for more price weakness—with spot business likely to fall an additional 20% by late summer when the metal could be going for as little as $8-9/lb.

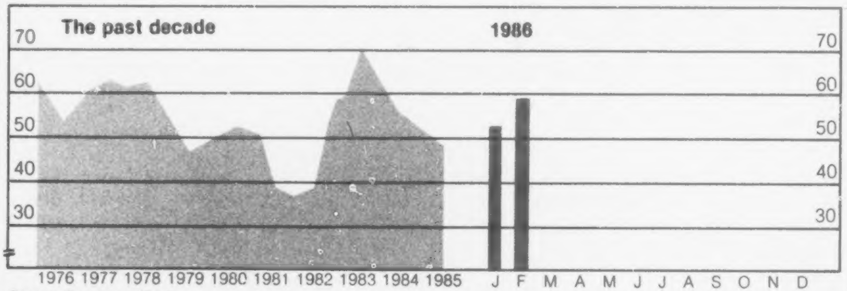
Lead

No near-term rally seems possible, especially with the new battery-buying season at least four months off. Rising U.S. stocks also suggest weakness. Ditto, lackluster U.S. demand which could fall as much as 3% this year to only 1.2 million short tons. Upshot: Prices are likely to back and fill in the low 18-19¢/lb range through spring—a far cry from the 32¢/lb quote that prevailed as recently as July 1984. Moreover, sluggish long-term growth (put at only 1% annually here in the U.S.) suggests that the weakness could spill over into 1987 and maybe even 1988.

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept

KEY ECONOMIC TRENDS

Spending plans rise on market

Solid business gains in the next few quarters seem certain—given such powerful forces as falling interest rates, a rising stock market, sharply lower oil quotes, and a declining dollar.

The interest rate slide is bound to stimulate demand because lower borrowing costs have traditionally spurred purchases by both consumers and business.

As for the stock market, recent studies show that anywhere from 3% to 9% of gains accumulated in a bull market get translated into additional spending. In dollars, this means about a $13-40 billion jump in consumer outlays over the next year.

And the plunge in oil prices should spur industrial production this year. Estimates call for an increase of 1.5% over what it would have been without the drop in oil. And industrial prices should decelerate by 1%.

Consider also the declining dollar *vis-a-vis* other currencies. While the impact of the 30% deterioration in the trade-weighted value of our money over the past year has been slow in coming, there is always a lag here. By year end, the shift should mean some reduced import pressures and probably a noticeable increase in our export totals.

Consumer spending (the biggest factor in our GNP) continues to look rosy. Thus, buying intentions (see chart) remain far above 1985 levels.

A look at the details here shows that 8.6% of the families surveyed now plan to buy a car over the next six months. More significant, some 4% plan on buying a home—the highest percentage in years. This, in turn, should help spur appliance and home furnishing sales.

Another major plus factor is the continuing low level of inventories. In the bellwether durable purchased materials sector (of crucial importance to industrial purchasing executives), the stock/sales ratio remains near 50.

The implication is clear: The continuing increases projected in final consumption will require new orders rather than any continuing inventory drawdown.

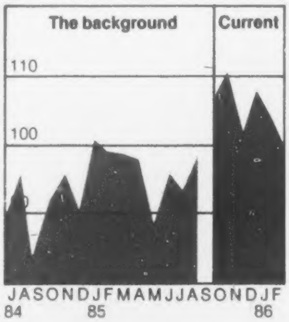
Even the heretofore weak capital goods sector doesn't seem that bad. While orders in this area continue to be volatile, they remain well above last year's disappointing level (see chart).

Modest bullishness here is further suggested by the Conference Board's latest capital appropriations series (a lead indicator of capital goods orders and eventually capital goods spending). Figures here rose nearly 14% over the latest three-month period.

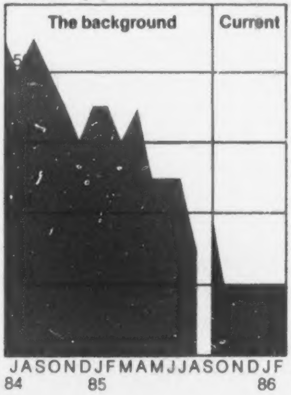
Not surprising, the same survey finds that the nation's manufacturers

Leading indicators

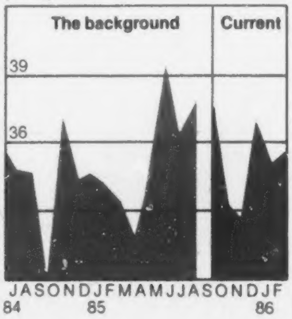
1. Consumer buying index
(Index: 1985 = 100)



2. Stock/sales ratio Durable purchased materials



3. Capital goods orders
(Bil. $)



are planning about an 8% increase in actual capital outlays this year—up significantly from the 5% figure recorded a few months ago when a similar survey was conducted.

Put all this into perspective, and you can see why the NAPM business barometer remains solidly in the plus column. Note on the chart that the bellwether yardstick of near-term activity has been above the neutral 50 mark for six months running—a sure sign that the current business upturn still has a long way to go.

Driving up costs

It seems hard to believe, but the average cost of owning and operating a new car now comes to nearly 50¢/mile.

The above estimate—supplied by Hertz—assumes a vehicle is driven 10,000 miles a year and is held for five years. But the figures can vary significantly—depending on the size of the auto chosen.

Here are the cost breakdowns supplied by Hertz: subcompact (40.9¢/mile), compact (47.6¢/mile), midsize (47¢/mile), intermediate (52.2¢/mile), and standard size vehicles (63¢/mile).

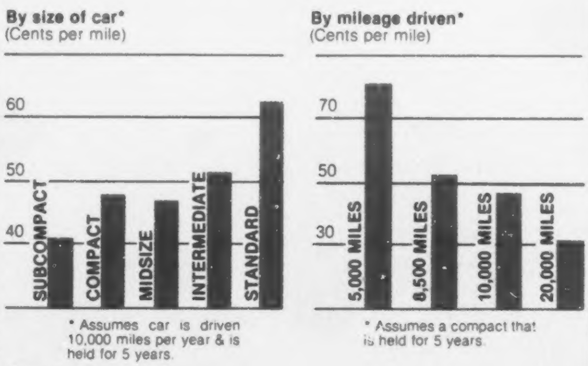
Significant cost variations are also possible by changing the number of years a car is held before being traded in. If you keep a vehicle for 10 years instead of five years, for example, you can shave almost 20% off cost/mile outlays.

Similarly, driving a car more intensively (while holding the car for five years) results in big savings. Example: The compact which costs 47.6¢/mile to drive 10,000 miles would cost only 30.6¢/mile if driven 20,000 miles per year.

Other key findings of the new Hertz study:

- Three-fourths of all outlays can be traced back to fixed costs (depreciation, interest, insurance, licenses, and fees). Only 25% goes for variable expenses such as gasoline, oil, maintenance, and repairs.
- The average new car is now kept 5.2 years—compared to only 3.6 years in the early 1970s. The average age of all vehicles on the road is now 7.6 years.
- Used cars, on average, will cost you about 40% less to own and operate.
- Parking and tolls (excluded in all of the above cost estimates) can add 10-40¢/mile onto operating costs in some major metropolitan areas.

Car driving costs

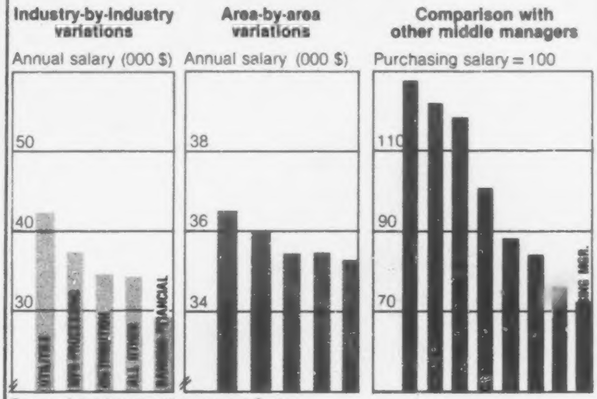


* Assumes car is driven 10,000 miles per year & is held for 5 years.

* Assumes a compact that is held for 5 years.

Source: Hertz

Middle management purchasing executives: A salary profile



Source: Administrative Management Society

A tale of paychecks

There's good news and bad news for purchasing managers.

On the plus side, the average salary increase received last year came to 8.2%—one of the highest increases noted for middle managers. But somewhat less satisfying is that the actual level of pay ($35,700 for the typical PM) ran well under those noted for plant, sales, and personnel managers.

- **Industry breakdown:** PMs working in utilities tend to fare better than their counterparts in manufacturing/processing industries—with their $42,800 average salary running nearly 14% above PMs working in factories. Banking/insurance/financial PMs are generally at the low end of the scale—earning only about $29,500 a year.
- **Regional breakdown:** Where you work seems to make very little difference on how much you make. Less than four percentage points separate the high $36,500 commanded by PMs in the East Central portion of the country and the $35,200 earned by East Coast PMs.
- **Job comparisons:** The typical plant manager's salary was 28% more than that of a PM. And sales and personnel managers topped purchasing managers by 21% and 16% respectively. On the other hand, many middle managers make considerably less than PMs—28% less for word processing managers and 24% for payroll managers.

Another important finding for all middle managers: More than half of the U.S. companies surveyed (54%) grant managers salary increases solely on the basis of merit. The average merit increase in 1985 was about 5.6%. Another sizeable increase of 5.5% is planned for 1986.

CURRENT PRICES

Price plunge sets record for U.S. index

The "energy effect" is now beginning to make a big difference in overall price yardsticks. Uncle Sam's bellwether industrial price index plunged a resounding 1.4% in the past month, making it one of the largest declines in history.

As might be expected, the fuel and power sectors spearheaded the decline—dropping off by more than 8% over this latest 30-day period. And even this doesn't tell the whole story. Even more precipitous declines were noted in such individual areas as fuel oil (off 13.8%) and gasoline (off 11.3%). Equally sharp falloffs hit home heating oil, kerosene, diesel fuel, jet fuel, and liquid petroleum gas.

There was some modest upcreep in both finished lubricants and electric power. But these should prove only temporary, with weakness also expected to spill over into these sectors before too long.

Aside from energy, however, the price pattern remains basically flat. In the capital equipment area, for example, the decline in truck prices (off about 1% last month) have been offset by scattered increases in printing trades, food, and service industry machinery lines.

Similarly, there were offsetting changes in chemicals over the last month, as organics moved up and inorganics moved down. But the organics advance could prove temporary as the impact of lower crude oil filters through to major petrochemical feedstocks. And the same is true of plastic resins where recent price increases consumed the offset by lower costs for ethylene, benzene, and other feedstocks.

Elsewhere, the 0.7% reduction shown for steel prices over the latest month is unrealistic. Reason: Government price collectors are picking up the new lower lists being posted but not the more important narrowing of available discounts. The fact is that on a "transaction" basis, prices have actually been rising.

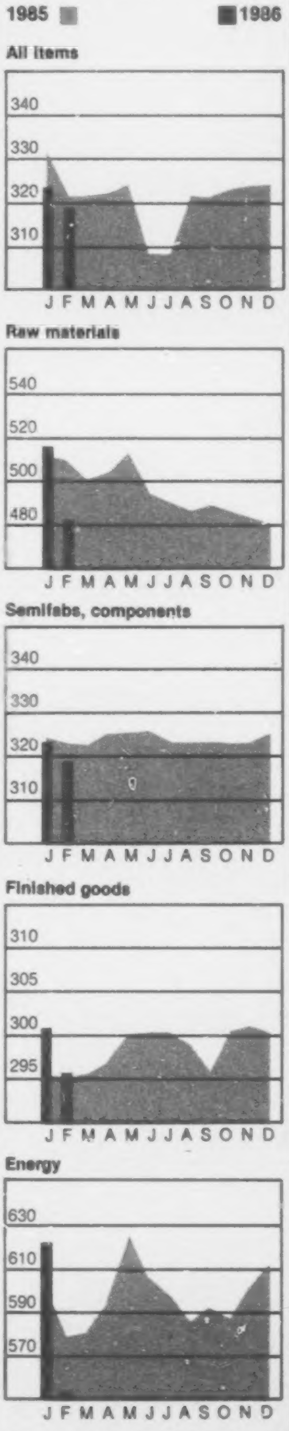
In the meantime other metals continue to show little overall change. True, aluminum is still edging up. But softness persists in other key non-ferrous sectors such as lead, zinc,

This month's breakdown

	Latest level (Feb.)	% change from: Month ago	Year ago
Bearings	353.5	0.0	2.2
Bolts, nuts, etc	278.2	0.9	−0.3
Chemicals, inorganic	295.1	−1.2	−1.8
Chemicals, organic	360.9	0.7	2.5
Concrete products	325.6	0.0	3.5
Corrugated cartons	264.1	−0.2	−8.2
Cutting tools, small	289.4	0.3	1.4
Electric lamps (bulbs)	349.3	0.8	1.7
Electronic components	199.3	0.2	0.3
Fans and blowers	362.1	0.1	1.2
Foundry and forge products	365.2	0.4	0.7
Fuel oil (residual)	756.5	13.8	−31.7
Furniture, commercial	315.0	0.0	4.1
Gasoline	472.8	−11.3	−6.8
Glass, flat	229.8	0.0	4.0
Glass containers	387.5	0.2	6.3
Gypsum products	362.2	0.5	5.2
Hand tools	380.8	−0.1	2.6
Hand tools, power driven	234.5	0.0	1.5
Industrial furnaces	395.5	0.1	3.3
Integrating and measuring instruments	235.7	1.0	1.7
Internal combustion engines	348.9	0.2	2.7
Lubricating oil	380.0	1.1	2.8
Lumber millwork	311.8	0.0	0.1
Material handling equipment	295.3	−0.1	−2.4
Metal containers	361.2	0.7	−2.4
Metal mill shapes (nonferrous)	306.7	−0.7	−2.4
Metal tanks	305.9	0.1	−0.1
Motors and generators	349.6	0.0	−0.1
Motor trucks	306.0	−0.8	3.3
Office and store equipment	155.2	0.5	1.0
Paperboard	262.7	−0.5	−8.1
Paper boxes and shipping containers	266.3	0.0	−3.8
Paper office supplies	237.1	0.2	−2.6
Paint	278.9	−0.2	1.5
Plastic resins	301.1	1.3	−1.9
Precision measuring tools	265.3	0.1	3.3
Pumps and compressors	357.2	0.0	0.9
Refractories	373.0	0.0	1.9
Rubber belts and belting	339.4	−0.1	−4.4
Scales and balances	230.6	0.0	0.2
Steel products	345.2	−0.7	−5.3
Switchgear	282.6	0.2	1.0
Textiles, synthetic fibers	150.5	−0.4	−4.4
Textiles, gray fabrics	151.5	−0.1	−0.7
Tires and tubes	237.3	0.7	−0.9
Transformers and power regulators	234.1	0.5	0.3
Welding equipment	298.9	0.0	2.0
Wire and cable	206.4	0.0	1.5

Industrial prices

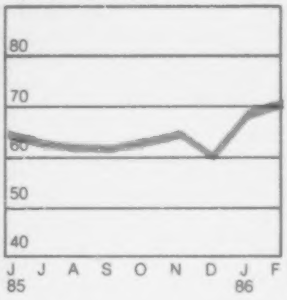
(Index: 1967 = 100)



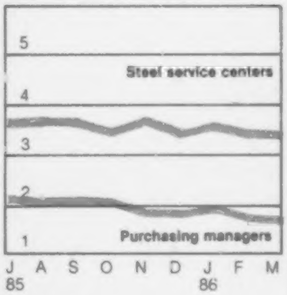
Source: Bureau of Labor Statistics

Steel

Operating rates

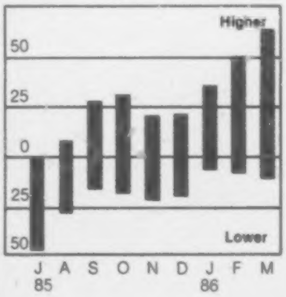


Inventories
(Months supply on hand)

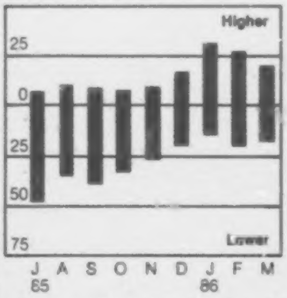


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer purchase



copper, mercury, and cobalt.

Where do we go from here as far as overall industrial price trends are concerned? One government spokesman feels that there could be another month or two of negative numbers. After that he sees a slow bottoming out, but not nearly enough to push averages above year-earlier levels—at least over the next few quarters.

STEEL SCENE

Bounceback shows some staying power in 2Q

The modest first quarter pickup in steel shows every sign of continuing through the April-June period.

The latest N.A.P.M. steel buyers' survey would certainly seem to support this. 27% of respondents are contemplating increased steel receipts over the next few months—almost twice as many as the 17% who feel that some additional cutbacks may be in order.

This marks the third straight month where pluses have predominated—a major reversal from the seven previous months when a solid string of negative receipt expectations were recorded.

This more bullish demand outlook is confirmed by distributors responding to the latest Steel Service Center Institute (SSCI) survey. Indeed, the gains here actually seem to be accelerating. Thus 65% now anticipate an increase in incoming orders over the next three months—compared to only 50% the previous month and just 37% the month before.

The optimism is perhaps best summed up by SSCI president Andrew G. Sharkey who says the outlook for his group appears to be good for the next 12-24 months. He notes that key steel markets should be relatively strong, especially in the automotive sector (cars, trucks, and minivans).

Sharkey adds that on a product-by-product basis, sheet and stainless products have been performing best. Other product lines, including structurals, plates, bars, and tubing—leave a lot to be desired—probably a reflection of continued sluggishness in traditional capital goods markets.

What does it all add up to as far as overall steel demand for the current year is concerned? *PW* talks with mill executives and metal analysts suggest that the domestic industry will probably be able to ship about 73 million tons of mill products this year—somewhat more than projected at the beginning of the year, though not nearly enough to tax the industry's capacity.

The latter can best be appreciated by the fact that the industry is still operating at under 75% of its potential—and this at a time that demand has been fairly brisk.

Not surprisingly, nobody seems too worried about supply availability. Only a scattering of shortage worries are mentioned by buyers, and these few are generally limited to coated sheet.

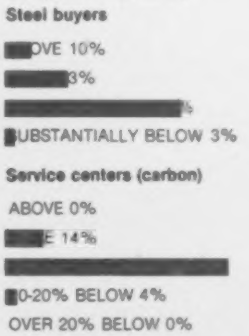
This ready availability is also helping to keep inventories quite lean. Thus steel buyers at latest report were holding only about a one and three-quarter month's supply. This represents a new low and is close to half a month under the year-earlier figure.

Service center inventories have also been edging down and now are just shy of 3½ months. One result: fewer and fewer distributors feel their stock levels are too high—only 25% now vs. 37% in the previous month and 46% the month before that.

Nevertheless, there are still more service centers who feel stocks are too high rather than too low. Implication: Some further paring might still be in the cards.

Also worth noting: Despite the declining dollar, foreign steel is still relatively cheap—probably because boosts in domestic tags have offset the dollar's upward tug on im-

Import prices
(Compared to domestic)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

port quotes. In any case, some 86% of queried service centers report price breaks on foreign metal, actually a bit above the 80% figure of the previous month.

And a similar pattern is noted in distributor purchases of stainless. Moreover, one out of three here puts the price gap in the 11-20% range—compared to only about one out of five at the end of 1985.

Again confirmation comes from steel buyers. Here 67% report advantages by going overseas—only a slight decline from the 74-76% range of the previous two months.

Finally, a word about future prices. The overwhelming majority of service centers expect replacement costs to go up over the next six months. But the rise is not expected to be all that great. Three out of every four respondents put the advance in the 2-5% range.

PROCUREMENT STATUS

No shortages as leadtimes hold

The continuing climb in industrial demand seems to be having little or no impact on leadtimes.

Some items in the electronics and steel sectors have inched out a bit, but these stretchouts have been effectively offset by scattered improvement in other sectors.

PW's exclusive leadtime index is now back in the neutral "50" range. That's actually a slight improvement over the "51" readings of recent months.

The reasons for the continuing good performance are obvious. Factory capacity still remains far in excess of current needs—the typical U.S. plant is still operating at 81% or less of its capacity and new facilities are pretty much balancing out the impact of slowly rising demand.

The balance of trade factor is also playing a role. Imports exceeded exports by a record $124 billion last year—thereby adding to overall domestic availability.

Buyer-seller coordination is still another factor cited by some purchasing managers for improved leadtime performance. The emphasis on just-in-time deliveries has been paying off—with both parties increasingly aware of the importance of having goods arrive on time.

And the goods are arriving on time—judging from the latest delivery performance survey from N.A.P.M. Specifically, the 5% reporting slower deliveries is completely balanced out by a similar 5% in the faster category. This implies that average speed-of-delivery rates have not changed all that much.

Further confirmation that no one is worried comes from the fact that 61% of respondents are now committing 30 days or less in advance for production materials.

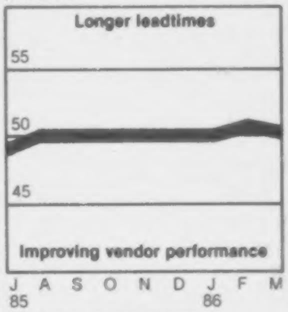
For thirteen consecutive months now, no shortages have been reported by N.A.P.M. survey respondents. This ties the previous record of thirteen months from May 1982 to June 1983 when the nation was in the throes of a major recession.

All of the above factors seem to assure continued inventory retrenchment. Thus 20% of survey respondents say they are cutting—outweighing the 17% who are now adding. That stock cutting is still going on at a time of steadily rising production activity cannot be overestimated—it is proof that the situation is still problem-free.

Monthly procurement status report

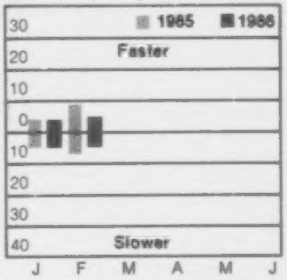
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.

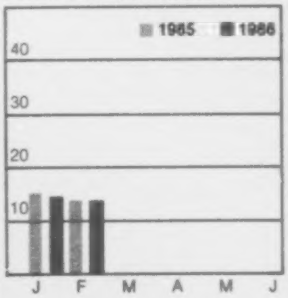


Delivery performance

(Percent reporting deliveries)

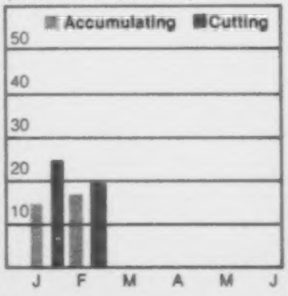


Forward commitments



Inventory strategy

(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Coated paper leads (now 6 weeks) could ease off. Ditto current 4-5 week waits on offset paper. Elsewhere, drops (with these new weekly leads) are noted for surfactants (½), mill supplies (1-3), and batteries (10-14). But c-r steel sheet has edged out (to 6-8). Ditto h-r bars (to 3-5).

Cleveland: A minor stretchout is reported in polyethylene resins (to 2-3 weeks). Other basically unchanged waits prevail in alloying materials (on demand), hardwood (1-2), softwood (1-3), skids (1-3), waterproof papers (4-5), corrugated cartons (2-3), and 2-ply fiber drums (2).

Los Angeles: Galvanized waits have almost doubled (to 12-14 weeks). Some stetchout is also noted in paints (to 3-5). No change in aluminum tubing (6-8), grey iron castings (8-10), brass castings (4-6), stainless coil (12-14), pumps (10-12), specialty wire (4-6), and paperboard cartons (3-5).

BUSINESS DATATRAK

Houston: High pressure heat exchangers have come in a bit (to 4-8 months). But some plastic resin leads could edge up over the next month or two. Other (unchanged) leads: centrifugal compressors (10-12 months), pumps (4-7 months), corrugated cartons (2 weeks), large transformers (4-6 months), and motor control centers (3-6 months).

Philadelphia: Steel leads are holding despite a modest demand pickup. Other prevailing leads (in weeks): copper alloy sheet and plate (6-8), standard valves (3-4), standard pumps and valves (8-10), standard bearings (stock to 4), aluminum products (4-6), and plastic sheet (2-3).

Pittsburgh: Manganese has stretched out to 3 weeks and should remain tight until May. Other typical leads: most other alloying metals (2), polyethylene and PVC resins (5-6), paint (4-5), seals (1-2), steel strapping (6-8), plastic bags (3-4), folding boxes (3-4), and laminating papers (6-9).

Leadtimes (in weeks)

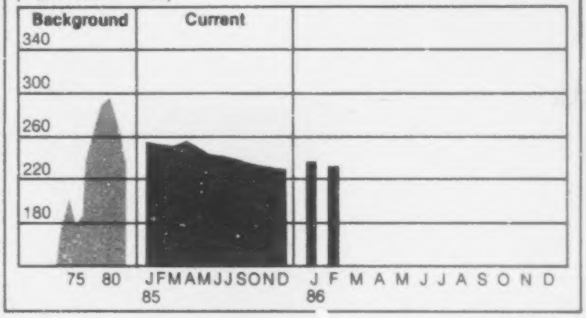
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	5½	6½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	2½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	3	3
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	7	13
Galvanized (Chgo)	6	7	7
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½7
Grey Iron Castings (LA)	9	9	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	13	13	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	11	11	15
Motors (Phil)	10	10	11
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	10
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	10
Resistors, Wirebound (Phil)	5	5	8
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	3
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	1
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Napthalene (Chgo)	2	2	2
Paint (LA)	4	1½	1½
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2	3
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	3
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	2½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	13	11	11
Aluminum Plate (Chgo)	12	10	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	12	9	11
Brass Castings (LA)	5	5	5
Brass Rods (Chgo)	6½	6½	7½
Brass Sheet (Chgo)	4	4	1
Brass Tube (Chgo)	7	10	10
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	4½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	3
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	5	5	5
Fasteners, Std. (Phil)	1½	1½	2
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	28	37
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	2½	2½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month	**233.7**
Month before	**236.4**
Year ago	**253.1**

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel structural shapes, Los Angeles, cwt	23.90	23.90	25.10
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	29.00
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	23.15	25.15	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.590	.563	.513
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.35
Brass, red, 85%, [sheet], lb.	1.32	1.30	1.27
Brass, yellow, [sheet], lb.	1.27	1.25	1.22
Cadmium, ton lots, lb.	1.00	1.00	1.25
Copper, electrolytic, wire bars, refd., lb.	.68	.67	.64
Copper sheet, over 24 in., lb.	1.41	1.39	1.36
Lead, common, N.Y., lb.	.18	.18	.17
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	240.00	250.00	304.00
Molybdenum, oxide, dealer, lb.	2.75	2.70	3.58
Nickel, cathode, dealer, lb.	1.90	1.88	2.32
Platinum, dealer, oz.	403.00	353.00	269.00
Silver, N.Y., oz.	5.56	5.91	5.75
Tin, Straights, N.Y., lb.	N.A.	N.A.	5.60
Zinc, Prime West, East St. Louis, lb.	.31	.34	.45
Zinc, die casting alloy, No. 3, lb.	.415	.415	.515
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.35	16.15	16.25
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	495.00	495.00	495.00
Wrapping paper, std. distributor cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.222	.236	.361
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.045	1.045	1.030
Cotton middling, 1", N.Y., lb.	.620	.600	.620
Printcloth, 48", 80x80, N.Y., spot. yd.	.64	.66	.68
Army duck, 37", 13 oz., yd.	1.48	1.50	1.96
Blended printcloth, 64", 78x54, yd.	.73	.75	.74
20s combed yarns	2.05	1.95	1.95
Wool tops, N.Y., lb.	3.60	3.60	3.60
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.455
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal.	.93	1.05	1.23
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.86
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.52	.52	.54
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.270	.270	.305
Polyethylene resin, low density liner film grade (market place), lb.	.32	.31	.28
Polypropylene, homopolymer grade (market price), lb.	.36	.35	.33
Polystyrene, general purpose grade (market price) lb.	.35	.35	.34
Polyvinyl chloride, pipe grade (market price) lb.	.29	.26	.31
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.26	.26	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb.	.73	.73	.69
Xylene tanks, gal.	1.36	1.36	1.26
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	305.20	303.90	303.15
Lumber 2x2 pine, mbf, cl	296.65	294.95	301.70
Plywood, plyform, ¾", msf, cl	566.55	567.95	569.65
Plywood, ⅝", msf, cl	375.05	377.00	375.35
Cement, bulk, ton, tl	66.07	65.92	64.46
Sand, ton, cl	6.42	6.41	6.20
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.21	47.14	47.56
Crushed stone, 1½", ton, cl	7.84	7.82	7.52
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.82	0.82	0.79
Gypsum sheathing, ½"x1"x8", msf, tl	210.17	207.69	206.69
Brick, common, per thousand, tl	185.71	184.06	179.89
Asphalt paving, AC-20	172.31	174.14	174.64
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.07	7.14	7.19
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	12.25	14.00	25.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.00	22.50	31.25
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.455	.625	.785
Gasoline, 94 oct., reg., Chi., tank car, gal.	.398	.578	.740
Heating oil, No. 2, Chi., bulk, gal.	.440	.630	.730
Heating oil, No. 2, N.Y., bulk, gal.	.605	.545	.808
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.468	.520	.748
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.330	.430	.365
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	74.00	77.00	92.00
Steel, No. 1 hvy., dlvd., Chi., ton	73.00	76.00	84.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.605	.575	.545
Copper, No. 2, East, wholesale, dlvd., lb.	.525	.505	.460
Brass, red, East, wholesale buy, dlvd., lb.	.565	.535	.505
Brass, yellow, East, wholesale buy, dlvd., lb.	.300	.290	.340
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.375	.355	.340
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.400	.370	.360
Zinc, old, East, wholesale buy, dlvd., lb.	.15	.15	.14
Lead, clean solids, East, wholesale buy, dlvd., lb.	.10	.10	.09
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	10.00	10.00	20.00
Paper, old corrug. box, dlr., N.Y., bon	10.00	10.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.11	.12	.12
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.13	.14	.30

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Photo courtesy of CSX Corp.

Among the innovative service concepts inaugurated by the CSX transportation units is the double-stack intermodal train, as shown here crossing Bay St. Louis on a dedicated Seaboard System Railroad run between Savannah and New Orleans.

Ton-miles to go before any real hikes

The buyers' market in transportation looks like it still has more time to run—not only through the current year, but well into 1987.

Certainly all factors point that way. They include excess carrier capacity, moderate increases in carrier costs, continued intra- and inter-industry competition, and increased buyer emphasis on contractual agreements and other buying strategies to maximize bargaining leverage.

It's not surprising that ***PurchasingWorld*** readers, responding to a recent nationwide survey, are betting on only a 3% increase in their overall freight bills this year. That's not as low as in 1985 when these same readers predicted only a 1% advance—but it is still very modest. And it is pretty much in line with both the forecasted inflation rate and with the 4% advance recently projected by Wharton Econometrics (***PW***, 3/86, p. 53). Even Wharton's forecasters have hinted that their projection could be on the high side since not all of the ramifications of the oil price decline were factored into their equations.

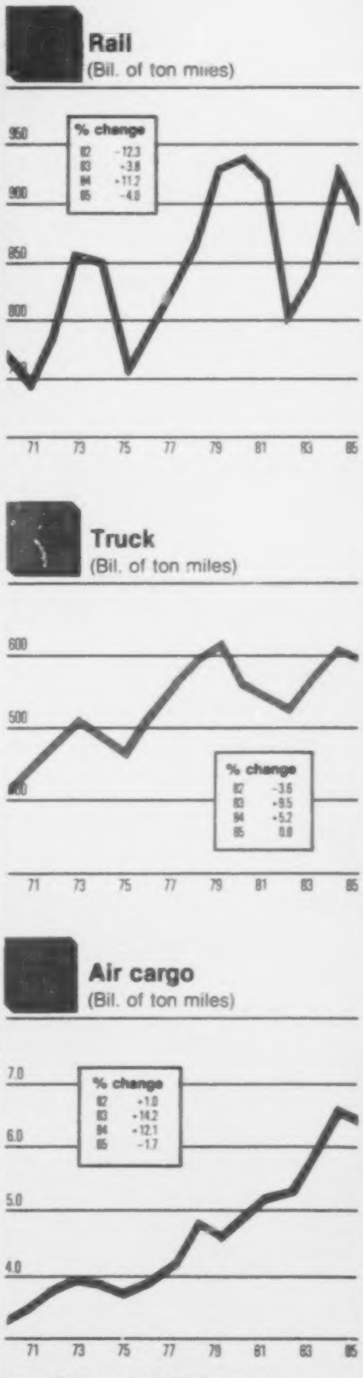
The surveyed buyers feel even better about the situation—nearly one in three feels he can hold rates at or under 1985 levels. One transportation buyer sums it up by saying, "We're going to be pretty tough on negotiations this year. With oil prices this far down, our carriers will have to present some pretty strong evidence to justify any significant rate increases."

This same buyer admits, however, that there could be some extenuating circumstances, particularly skyrocketing insurance rates for carriers. Also, capital costs have continued to advance. Nevertheless, he is confident that the increase in his own company's freight bill can be held to a few percentage points.

Perhaps the best measure of how well transportation buyers are doing comes from recent statistics which show freight costs now accounting for 6.8% of GNP—down from 8% as recently as 1981. Credit this trend to a combination of factors:

- Freight rates have not risen as much as the general inflation rate over recent years.
- The nation's industrial profile is changing.
- Deregulation has radically altered the industry.
- Buyers are employing better freight

Freight demand trends



Source: Transportation Policy Associates buying strategies.

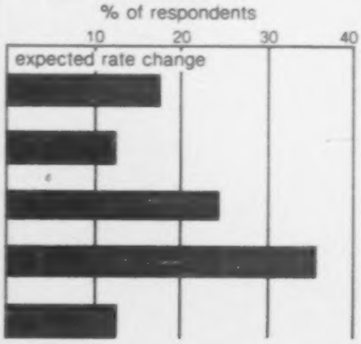
Here's a breakdown of the supply-demand-cost-price trends for each of the major modes:

- **Rail:** Relatively modest increases in demand suggest continued moderation. Specifically, ton-miles should rise only about 1-2% this year (to near 910 million ton-miles)—still leaving totals fractionally under the record 935 million peak in 1984.

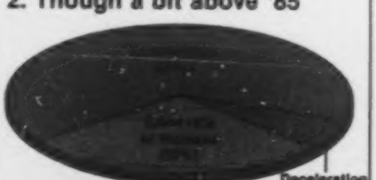
One of the demand problems faced by rails is that they depend on grain and coal for 50% of their tonnage, and both of these sectors have been disappointing in the last few years. Another factor is the railroads' larger-than-average dependence on smokestack industries which have tended to lag overall gains in GNP during the current recovery.

What PW freight buyers say

1. 1986 rate increases will be modest



2. Though a bit above '85



3. With more emphasis on contractual agreements

Source: PurchasingWorld

And the long term prognosis isn't all that bullish, either. A new government forecast, for example, puts the average tonnage rise from now through 1990 at less than 1% a year.

The overall rise in rail freight rates is also likely to be small. One hint comes from a government forecast for operating revenue and revenue ton-miles which suggests only about a 3% rise in 1986—close to what Wharton projected.

- **Trucking:** Recent demand trends haven't been very robust here. Overall intercity ton-miles dropped 1% last year (to 600 billion). But a fair-sized 6% is anticipated for the current year.

One positive factor in truck demand is the trend toward just-in-time delivery. As companies adopt this concept, they tend to rely more on nearby suppliers. Rails just can't compete with trucks in time, service, and flexibility when the hauls are relatively short.

Whatever the truck tonnage figures for this year, there is still more-than-ample capacity around. It is worth noting that between 1980 and 1984, the number of regulated motor carriers jumped 70% to more than 30,000. Discounting in some areas isn't all that surprising.

How much discounting? According to a recent survey in *Traffic Management*, about 73% of the shippers surveyed said they were getting discounts on more than 75% of their traffic, with most of the discounts put in the 25-40% range.

While price shading is expected to continue, it doesn't rule out a modest increase on a transaction cost basis. One top industry analyst, for example, pegs the advance at 3% for LTL rates this year and maybe 3.5% in full truckload rates.

- **Air cargo:** Competition, intensified by disappointing demand, continues to plague the airlines. Demand for domestic air freight ton-miles dropped almost 2% in 1985. But there are signs of a turnaround in recent months as the economy continues to grow. Nevertheless, it would be unrealistic to see more than a 2-4% gain for 1986 (perhaps in the 6.7 billion ton-mile range).

About the only really big growth area in the air sector has been small package shipments. According to the Air Transport Association, more than 192 million small package and express shipments were reported last year—up more than 20% from the previous year.

But the competition is fierce in the small shipment area. Overall revenues went up the same percentage as physical volume because prices didn't rise at all in 1985.

- **Barge:** The big story here is the huge surplus of ships overhanging the market. A recent Commerce Department study, for example, suggests that without an increase in the rate of dry cargo barge scrappage, overcapacity will probably continue for at least five years (assuming no net addition to the current fleet).

The outlook for tank barges is even worse. Given projected annual growth of 2.2% or less, mostly for inland movement of petroleum products, chemicals, and crude petroleum, overcapacity will continue indefinitely if the current fleet size is maintained.

It is no wonder that continued price weakness is noted, with little or no price change anticipated in the current year by *PW* survey respondents.

No matter what the transportation mode or modes used, these same buyers seem determined to keep rates as low as possible. This shows up most clearly in answer to a question on whether shippers were putting increased emphasis on contractual agreements. More than half said "yes"—with a fair number saying that more than half their overall tonnage moves this way. The overall savings? Somewhere in the 5-15% range.

But freight buyers are taking other cost savings approaches, including more use of intermodal service, shifts in transportation modes, the concentration of traffic with a smaller number of carriers, and a rise in the use of transportation specialists such as brokers, shipping associations, and agents. In most cases, the use of specialists is more for better service than for any big price saving. **PW**

There's energy behind the restraint

Inflation forecasts remain subdued in almost every sector—with a major influence coming from sharply lower energy tags.

If there is any doubt about this, take a look at the new Data Resources Inc. (DRI) quarterly rundown of key commodity groupings. In only one instance is a price advance of more than 5% anticipated for the current year. And several items are actually projected to move lower.

DRI's overall industrial commodity price index forecast—a key purchasing price barometer—points to only a 1.1% increase. That's considerably smaller than just three months ago when a 1.6% increase was projected for this year.

Any subsequent acceleration is also expected to be modest. Overall increases of only 2.6% and 3.6% are seen for 1987 and 1988. These projections are expected to hold, despite the fact that the current demand gains are expected to continue—with 3% real GNP advances anticipated for both years.

A lot of factors are influencing these restrained advances. Average hourly earnings, for example, are projected to rise only 3.1% this year and 4.3% in 1987. And this is before factoring in a productivity offset which is expected to average about 1.5% a year.

Here's a more detailed product-by-product price rundown, as gleaned from the DRI computer printouts prepared for *PW*:

- **Steel:** Many of the recent price increases seem to be holding. Look for average quarterly increases close to 1.0% this year—resulting in a higher overall level of steel prices of around 3.5% over the next 12-month period ending December 31, 1986. Moreover, stronger economic growth in 1987 and 1988, coupled with quota limitations on imports, should push prices up 3.5% and 4.3% over the next two years.
- **Nonferrous metals:** Meaningful increases will be delayed until 1986 when stronger construction and transportation markets will combine to firm prices. In any case, count on an escalation rate of 1.8% per quarter between fourth quarter 1986 and fourth quarter 1987—about double the advances anticipated over the next four quarters.
- **Industrial chemicals:** Held down by declining feedstock costs and stagnant end-market activity, prices in the fourth quarter 1986 will stand a mere 0.1% above year-earlier levels. But some gains are anticipated for the following year (1987)—reflecting steady growth in the construction sector and an end to the drop in feedstock costs. Best bet at that time is for an average 0.8% increase in each quarter of 1987.
- **Construction materials:** Figure on only modest price escalation—with most of the series monitored by DRI increasing at a compound annual rate of anywhere from 2.5% to 4.5% over the next few years. But tags on energy-intensive products such as bituminous paving materials and gypsum should show little escalation.
- **Component parts:** Not too much change is seen for the current year—when fasteners and valves and fittings are projected to advance only 0.9% and 1.5%. But next year (1987) could see some fair-sized increases—5.0% for fasteners and 3.7% for valves and fittings.
- **Machinery:** Modest cost inputs and just so-so demand will keep price increases down. The forecast is for an overall increase of only 2.3% this year and 3.7% and 4.3% in 1987 and 1988. "Oilpatch" machinery will lag even these modest projections, with projections of 0.9% for 1986, 2.0% for 1987, and 2.9% for 1988.
- **Electronic components:** Continued import pressure from Japan and South Korea, along with excessive production capacity here, will work to restrain price increases through most of the near term. The price index for overall electronic components is targeted to rise just 1.0% this year, followed by 3.3% in 1987 and 3.4% in 1988.

Price outlook through 1988
(comparison of fourth quarter pricing)

	Percent change		
Product	86/85	87/86	88/87
Raw materials, energy			
Crude materials, ex. fuel & food	-3.4	1.2	2.3
Intermediate materials, ex. food	1.4	3.2	3.8
Industrial chemicals	0.1	3.2	8.4
Gasoline	-8.5	-1.5	2.9
Metals			
Steel mill products	3.5	4.2	4.8
Galvanized sheet	5.6	5.8	3.2
Steel bars, carbon	3.7	3.9	4.0
Steel foundries	3.0	5.2	4.2
Magnesium ingot	2.5	3.5	2.4
Zinc, die cast alloy No. 3	-0.2	6.7	3.6
Copper scrap	2.5	9.9	4.5
Aluminum shapes	4.0	6.3	4.3
Components			
Fasteners	0.9	5.0	3.8
Laminated plastic sheets	1.6	4.4	4.0
Corrugated boxes	3.5	4.5	4.8
Transistors	0.2	0.1	-0.8
Machine shop products	3.1	3.9	5.9
Construction products			
Prepared paint	2.7	3.2	2.8
Explosives	2.5	3.7	5.6
Heating equipment	3.1	4.1	4.3
Fabric. structural metal prod.	2.8	4.5	3.9
Flat glass	1.5	3.7	3.8
Insulation materials	0.5	2.9	3.5
Machinery			
Metalworking machinery	3.3	3.8	4.0
Material handling eqpt.	1.3	2.9	4.1
Special industry mchy.	5.0	4.4	5.2
Electrical eqpt.	3.7	4.4	4.2
Trucks	3.0	4.8	4.8

Source: Data Resources, Inc.

- **Energy:** More price declines are inevitable following the crude oil price slide. Overall fuel and power costs should be off about 4.7% over the 12-month period ending this December. Gas fuel tags could be off by 6.4% over the same period. And electric power hikes will be held to 1.2% over the same span. ***PW***

MAY 1986

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PurchasingWorld®

Systems contracts put control in MRO buying

Buying fasteners—specials here, standards abroad

Auto buyers demand corrosion-fighting steels

Purchasing gains clout in B-school classrooms

Lid to stay on packaging prices

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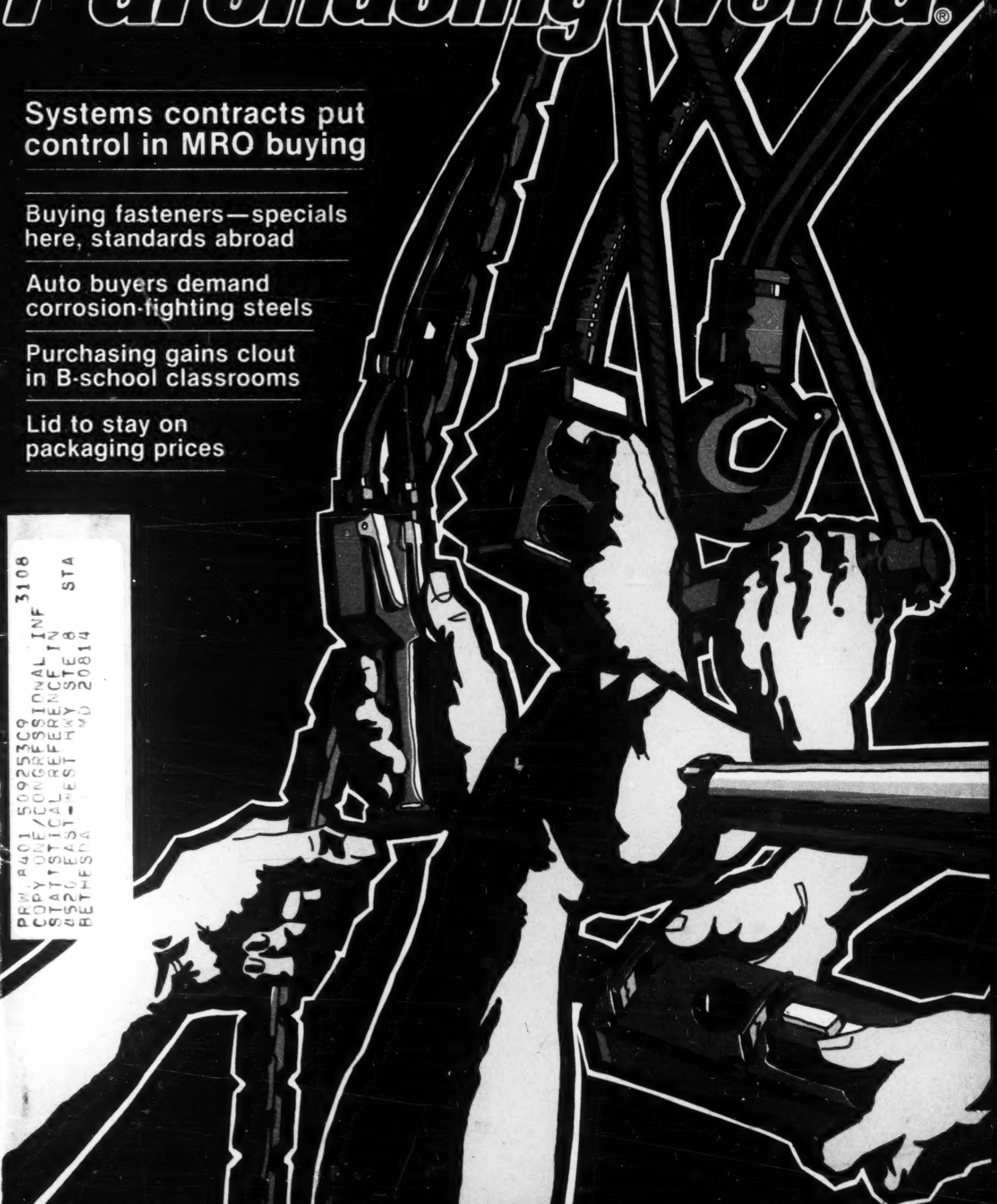

PurchasingWorld®

Helping you manage the business of buying

May 1986 Vol. 30 No. 5

Special report: MRO buying

51 **Systems contracts put control in MRO buying**
Here's how systems contracts are taking inventory, paperwork, and cost out of MRO buying and putting reliability and quick response back in at Carborundum Co.

54 **Hot competition in MRO cools prices**
It's another problem-free year ahead for MRO buyers. Overall prices will hold to about 2-2.5%, but demand should climb 4-5% in total dollar sales.

56

Features

56 **Lid to stay on packaging prices**
Cut-throat competition plus plenty of capacity will continue to hold prices down in almost all areas of the $70-billion-plus packaging market. Expect only modest increases—about 2.7% overall.

64 **Buying fasteners—specials here, standards abroad**
The domestic fastener industry—like a lot of American business—is going through a shaking out period with fierce competition at home and from abroad. That spells a very healthy buyers' market—but it could spell problems in the long-run.

70 **Automakers demand corrosion fighting steel**
Facing the threat posed by plastics and other substitute materials in cars, steelmakers are going out of their way to respond to automaker's demand for a wide choice of better steels.

77 **Purchasing gains clout in B-school classrooms**
There's big demand by companies for degreed purchasing graduates. Business schools are placing more emphasis on purchasing and materials management course work to meet it. Here's an update of what programs are being offered.

82 **Oil cuts to spur GNP, impact prices**
Analysts at Wharton Econometrics take a close look at the effect lower oil prices will have on key economic sectors.

96 **Enter *PW*'s Crystal Ball contest**
Win a new computer and have some fun at the same time by predicting the outcome of 1986 economy.

Cover by Donna D'Amico

PW
Crystal Ball Contest

96

Departments

4 **PW Pointers**
6 **Editorial**
8 **PW Predicts**
19 **Datatrak**
38 **Law**
42 **Negotiations**
44 **Transportation Report**
86 **Pinkerton on PCs**
90 **Sample Pak**
94 **Ad Index**
95 **Classified**

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PW PREDICTS

Deflating oil tumble hits all sectors of economy

The price news is almost too good to be true. The big drop in crude oil prices has pushed most key inflation yardsticks into the negative column.

Industrial producer prices—the area of most immediate interest to purchasing managers—registered a 2% decline during the first three months of the year. And even with some second quarter leveling off, the first half of the year is likely to be down about a percentage point or two compared to late 1985 levels.

Confirmation of all this comes from buyers responding to the latest NAPM Business Survey report. Specifically, 17% of the respondents report lower prices. More significant, those reporting price declines have equaled or topped those being socked with increases for 16 consecutive months.

Aside from oil and other forms of energy, there's widespread easiness in such basic commodity areas as industrial chemicals, plastic resins, many construction materials, and a fair number of nonferrous metals.

The sharp decline in oil tags, of course, has played a major role in all this commodity weakness. But there are other important downward-tugging pressures:

- **Less-than-expected demand gains:** Real GNP advances so far this year have only been 2-3% at annual rate. That's not much of an improvement over last year's 2.2% increase.
- **Continued import competition:** This is occurring despite a weakening dollar—probably for several reasons. For one, overseas production costs have also dropped because of lower-priced oil. And the U.S. market is so large that it effectively sets the world price for a wide range of goods.

Also, the U.S. dollar has not declined that much against the currencies of many of our trading partners. Nor is it likely to do so. This is particularly true of Canada, our number one trading partner.

- **Continued excess capacity:** The average American facility is currently operating at only 79.4% of its potential—well below the 85% rate commonly accepted as the cut-off point between a buyers' and a sellers' market. Industrial production may advance by only 3-4% in 1986 *vis-a-vis* all of last year.

Looking at the all-inclusive GNP deflator, little more than a 3% increase now seems likely for the year as a whole—about one-half a point under levels predicted just a few months ago.

And the drop in more sensitive industrial producer prices is likely to be even more dramatic—the previously predicted 1-5% increase is now being revised to near-zero.

Similar improvement is also projected for the cost-of-living—with the overall advance here into the 2.5-3% range.

Paper demand

Look for paper demand to continue growing at a respectable clip—with about 2.3% average annual gains likely from now into the mid-1990s.

But advances will be uneven. The best showing will be in uncoated groundwood, coated papers, and uncoated free sheet. But use of packaging and industrial grades may well decline (perhaps as much as 2% a year)—as plastic continues to make inroads in the key bag and sack markets.

A new study by Communications Information Services, Concord, CA, looked at printing and writing grade demand from an end-market perspective, and found variations—with business forms, inserts, catalogs, and office copy paper expected to lead the pack.

And, paper markets are likely to remain fiercely competitive—as U.S., Canadian, and off-shore producers vie for market share.

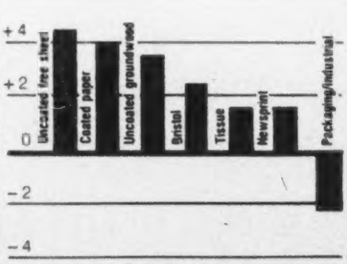
Some other specific projections of the report:

- Total U.S. demand for paper grades will reach 54.2 million tons in 1995 (vs. 44.8 million this year).
- Total per capita paper consumption will increase to 76.3 lb (vs. 58 in 1986).
- Imports of printing and writing grades (except newsprint) will comprise 5.9% of total new supply in 1995 (vs. 4.8% in 1986).
- The impressive 4.4% annual rate of increase seen for uncoated groundwood will be sparked by big gains in inserts and forms.
- The expected 4% annual rate of growth for coated paper will be uneven—with biggest gains in coated free-sheet and smallest in coated groundwood.

Paper demand: a long look ahead

(Average annual % change 1986-1995)

By grade



(Avg annual % change '86-'95)

By market

Business forms	6.3
Inserts	6.2
Catalogs	5.1
Office copy paper	4.9
Directories	3.3
Envelopes	3.2
Periodicals	2.9
Commercial printing	2.8
Books	2.7
Converting	2.4
Stationary/tablets	0.9
Labels and wraps	−0.2

Source: Communication & Information Services

Building materials

CURRENT SITUATION: The market remains easy because of ample supplies, strong import competition and falling crude oil tags. **Overall price averages are running about 1.5% under year-earlier levels,** despite continued brisk building activity. Fair-sized advances in aggregates and in some ready-mix concrete lines—and even lumber—have been offset by weaknesses—in asphalt (50% of which is oil) and in steel.

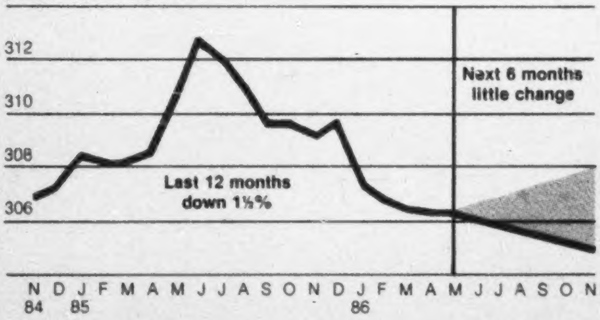
DEMAND: Construction outlook is bullish as mortgage rates drop into the single-digit range. Housing is expected to hit 1.85 million starts, up 7%. **Look for gains in key areas.** Softwood lumber should easily top the 31.7 billion board feet shipped last year. Other anticipated shipment gains—softwood plywood (4%), particleboard (6%), flat glass (3%), cement (3%), brick and structural clay tile (6%), concrete block and brick (6%), ready-mix concrete (7%), gypsum products (5%).

SUPPLY: Capacity is more than adequate in nearly all lines. And importers stand ready to fill in any holes that might turn up. More than 15% of cement consumption is now traceable to imports. And Canadian shipments will continue to be a major factor in the lumber market. Foreign firms have either been purchasing domestic facilities or entering the market with new plants in such areas as cement, floor coverings, and plumbing fixtures.

PRICE OUTLOOK: Small advances are possible as demand improves and the dollar weakens. Dumping charges pending in the steel area could mean as much as a $20/ton increase in some structurals over the next few months. Lumber prices are also more buoyant, though Canadian competition should keep any upward move here to very modest proportions. Also by year-end, averages for flat glass, paint, and insulation materials should be up 3%, 2%, and 1%, respectively.

Construction material prices

(Index: 1967 = 100)



Electronic Components

(%change in $ consumption)

	Semiconductors	Passive Components
1985	−24.0	−6.0
1986	+13.0	+8.5
1987	+24.6	+13.1

Source: Henderson Ventures

Electronic components

The industry appears to be bouncing back from a disastrous 1985, when consumption dropped nearly 25% for semiconductors and more than 5% for passive components. This year, for example, Henderson Ventures, a major market research house, sees semiconductors and passive components up 13% and 8.5%, respectively. And this will seem modest compared to 1987, when advances of nearly 25% and 13% are anticipated. Price averages for semiconductors are also expected to firm—prodded in large part by better demand and the up-to-20% price increases posted by the Japanese.

Steel

The small price hikes in the first quarter have held up for the most part. But additional hikes scheduled for May (ranging from $12-20/ton on hot-rolled, cold-rolled, and coated products) have failed to hold. Meantime, demand isn't all that bad. The first quarter domestic shipments came to nearly 19 million tons—up about one million from a year earlier. But strong imports (24% of the market so far this year) could lead to some eventual weakening, especially if yearly tonnage figures fail to top last year's disappointing 73 million tons.

Personal computers

The price war continues. The latest salvo was fired by IBM which reduced tags on virtually all of its existing computers by as much as 25%—bringing a basic PC to under $2,000. And cuts on other IBM models may not be the last word. The company's existing AT model (at $5,295) will be competing against a new AT version that is one-third faster at the same price. A new IBM laptop which sells for $1,995 could also set off a round of price reductions by competing laptops which have been selling in the $2,500-4,500 range.

Aluminum

Markets remain fairly buoyant, with producer ingot now fetching 66¢/lb (vs. only 55¢/lb at the beginning of the year). Producer billet is also up—close to 74¢/lb. Also on a bullish note: continued declines in Free World primary metal stocks—off over 20% in the past year. Demand gains, however, should be modest, with U.S. domestic deliveries expected to rise only about 1-2%—to 7.75 million tons. Even with labor contracts expiring, no one expects a strike. Hence only limited

PW PREDICTS

Zinc

CURRENT SITUATION: Prices will continue to be on the shaky side—with producer metal being discounted to as low as 30¢/lb. Tags were as high as 47¢/lb last spring—making for a price decline in excess of 30% in just one year. Producers have moved to cut output, but **reductions have generally been small—not nearly enough to redress the supply-demand balance.**

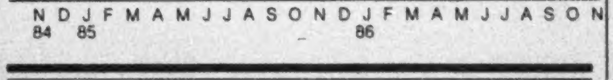
DEMAND: Don't expect much of a pickup this year. Free World consumption may hit 4.7 million metric tons—making for only a 1% overall increase. And the Eastern bloc could cut their imports by 50,000-60,000 tons—thus negating the Free World gain. **The U.S. outlook isn't that bullish either.** Tonnage consumed in galvanized steel will rise, but zinc die casting alloy use could drop. **Look for only a 3% overall domestic rise this year.** Government estimates see only 2% annual gains through 1990.

SUPPLY: The global glut is likely to persist because recent cutbacks may not last. Producers find that it's much more efficient to run at full production. And the industry lacks mine-smelter integration—with custom smelters (who make their money on treatment charges, not on the price of the metal) controlling a large part of the market. Several major firms are expected to boost concentrate output this year. **Upshot: Mine production could rise by five million metric tons this year.**

PRICE OUTLOOK: It's hard to see any near-term advance. Given demand and supply problems, the metal will be lucky to maintain its current "low 30s" profile through summer and into early fall. Beyond that, a modest uptrend is possible, assuming that the U.S. and other Free World economies continue to advance. Even so, **tags will still be far under the highs of a few years back.**

Producer zinc prices

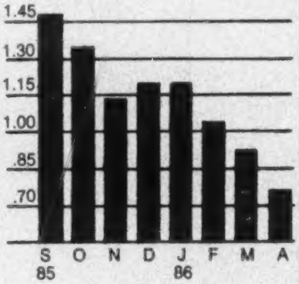
(cents/lb.)



forward buying and relatively modest price gains are expected in the months ahead.

Benzene prices

($ lb. spot, Houston)



Chemical feedstocks

Benzene is weakening. Best bet: second quarter spot prices averaging out near 75¢/gallon—a far cry from the $1.30/gallon quote of early January—with contract prices put at 80¢/gallon. Lower oil tags are also pressing ethylene. Some producers are asking only 15.5¢/lb for their second quarter production—off some 3.5¢/lb from the average report in the first quarter.

ABS plastics

A weakening market and imports have pushed transaction prices for key pipe grade down 1¢/lb into the 60-67¢/lb range—with some isolated quotes as low as 58¢/lb. And resins to the automotive and refrigeration markets have dropped some 3¢/lb. Here, heavy import competition is a factor, with added impetus coming from both substitution of polystyrene and lower feedstock costs (stemming from the recent decline in crude oil prices). Styrene acrylonitrile (SAN) resins are down as much as 10¢/lb.

Machine tools

Japanese producers are said to be dumping equipment at substantial discounts. Reason: They fear the imposition of quotas and are attempting to build up as big a sales base as possible. Nipponese producers are said to be particularly aggressive in products such as computer-controlled lathes where they are fighting each other more than they are U.S. firms. Further adding to the Japanese pressure on U.S. markets is the fact that these overseas sellers have a lot of excess capacity.

Lead

Markets remain depressed, with the metal remaining in the low 18¢/lb range and spent batteries going for as low as 1.5-1.75¢/lb. New consumption forecasts add to the bearishness—with 1986 U.S. chew-up expected to remain unchanged at 1.1 million tonnes. Other bearish factors: 1) continued ready-availability of secondary lead, 2) the massive supply of scrap building up around the world, and 3) the fact that two-thirds of the primary supply is mined as a by-product or co-product of other metals. Continued development of longer-

PW PREDICTS

Printer prices

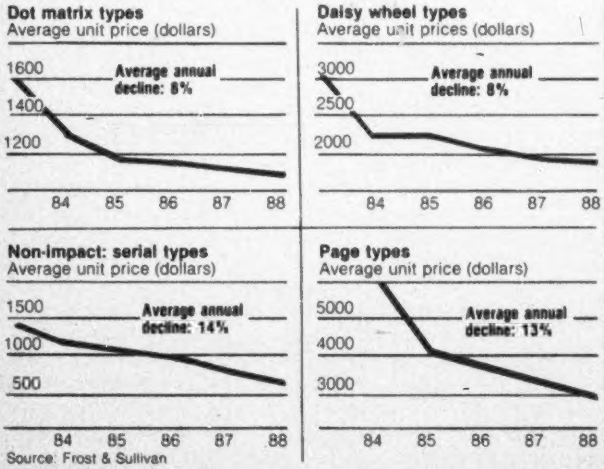
Budget for substantial cost declines in letter quality and near letter quality (NLQ) printers over the next few years. Best bet: Average unit price declines should range from 8 to 14% annually.

These new estimates are part of a Frost & Sullivan evaluation of the entire printer market. Behind the anticipated declines are 1) economies of scale, as sales rise close to 50% a year, and 2) improving technology. Here's a more detailed rundown by type of printer:

- **Dot matrix models:** year-to-year unit price changes will be a function of both price decreases and changing product mix. True, the more expensive (over 250 cps) segment will be capturing an increasing share of the market. But more than offsetting this will be continuing price decreases.
- **Daisy wheel models:** Product mix is moving in the opposite direction, with cheaper, slow-speed under 35 cps types growing fastest. This adds to the effect of continuing price decreases. In any event, unit tags for the under 35 cps group will fall 15% a year through 1986.
- **Serial non-impact printers:** Direct thermal models have been holding the majority of the market here—but generally have been low-price, draft-only models attached to portables or home computers. Hereafter, ink-jet machines, quality direct thermal, and thermal transfer models will capture an increasing share.
- **Page non-impact printers:** The market virtually began in 1984 with the introduction of the Canon laser printer engine. Last year's large price drop was caused by the increase in the number of low-priced, limited-function models. But from now on, price decreases will moderate.

Office printer price trends

(The outlook for letter-quality and near-letter quality types into 1988)

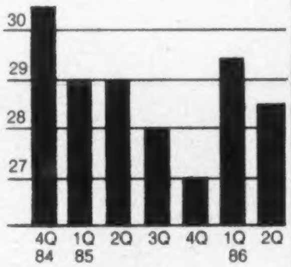


Source: Frost & Sullivan

lasting and reduced-lead content batteries isn't helping.

High density polyethylene

(¢lb., injection molding grade)



High-density polyethylene

A second 1986 attempt to boost prices 3-4¢/lb has apparently failed to hold. Expect to continue paying 27-30¢/lb and 30-33¢/lb for the injection molding and blow molding grades, respectively. Weakness indicates that supply is nowhere near as tight as official 90% + nameplate operating rates would seem to suggest. Reason: a good deal of swing capacity is being shifted away from linear low-density polyethylene—enough to offset what now looks to be about a 5% increase in overall 1986 high-density demand.

Paper

About $20 of a recent $30/ton boost in linerboard has held up. And producers are aiming still higher—with at least one major mill announcing a new list increase to $320/ton. Also, some price boosts have been posted in uncoated free sheet (at the low end of the line in roll offset paper and registered bond)—with average quotes in these areas said to be up by about $30/ton. Market pulp is also firming—aided by recent weaknesses in the dollar.

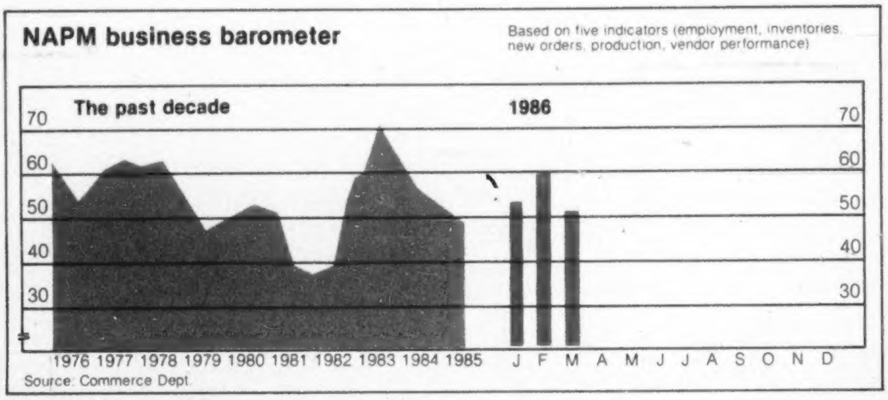
Copper

The red metal continues to bump along at near 70¢/lb, despite the possibility of a summer work stoppage. Two reasons: relatively flat consumption and ample supplies. On the latter score, it would take at least a month-long strike to have any major impact. It is difficult to see tags rising much above 75¢/lb even if there are some labor problems. Best bet for 1986 as a whole (assuming no strike): a 70¢/lb average—just 3¢/lb above last year's low—hardly reassuring for an industry where the break-even point is also estimated to be around 70¢/lb.

Computer software

Competition from mail order outlets is resulting in steep discounting. Lotus 1-2-3 is available for as much as one-third off its official $495 list. And Ashton-Tate's dBaseIII is going for 40% or so under its official price of $695. Other signs of easiness: 1) growing pressure for volume discounts on the part of large corporate customers and 2) increasing availability of cheap clones—some versions of Lotus 1-2-3 are selling for as low as $100.

BUSINESS DATATRAK



NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)

Source: Commerce Dept.

KEY ECONOMIC TRENDS

Call it a mini-mini boom

Business gains have been relatively modest over the past month or two. While the trend is still up—and likely to stay up—increases have not been nearly as robust as expected.

Why, then, is growth more restrained? Several factors are in play here: 1) the normal lag before lower inflation, 2) the respite in car buying following last Fall's big buying binge, and 3) relatively high (7%) unemployment rates.

But these should be regarded as short-term phenomena. There is little on the horizon to suggest anything but further gains—albeit moderate ones—in orders, in production, and ultimately in final sales.

For one, key barometers of activity a few months down the pike are still positive. That's certainly true of Uncle Sam's index of leading indicators which has been rising at a rate of 0.5% a month since last Fall. And the same pattern is evident in the N.A.P.M. Business Barometer (see accompanying chart).

Manufacturing inventories also point to better days ahead. The stock-sales ratio here has fallen to what most economists feel is now a rock-bottom level—suggesting that further increases in final demand will have to be met by new production.

Equally assuring is the optimism of the nation's corporate leaders. Dun & Bradstreet's Sales Optimism Index has bounced back to early 1985 high levels.

As Joseph Duncan, D&B's corporate economist says, "Survey results reflect the fact that the economy is strengthening after a lull in 1985—with strong consumer demand and reduced competition from imports fueling the brighter outlook."

In any case, 73% of durable goods manufacturers responding to the D&B survey expect second quarter 1986 orders to top year-ago results—a modest gain over the 70% reading of three months ago.

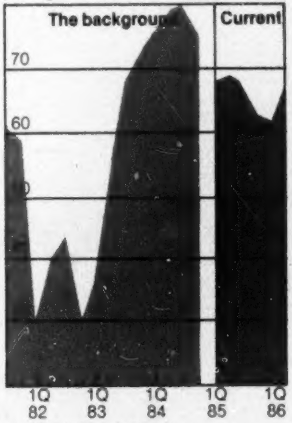
Construction, too, has been looking up in recent months thanks to lower mortgage rates which, at last report, were dropping back to the single digit range for the first time in years.

Housing permits (a leading indicator of housing starts) are now running near 1.9 million annually—about 200,000 above year-earlier levels. Starts for the year could be almost as high, and certainly will be above last year's 1.74 million level.

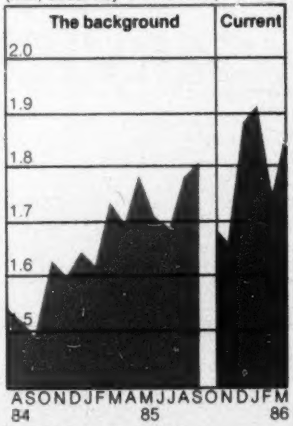
Help-wanted advertising also adds to the optimism. While totals have plateaued out in recent months (and that's why umemployment rates have failed to drop down into the 6% range), ads are still significantly above the

Leading indicators

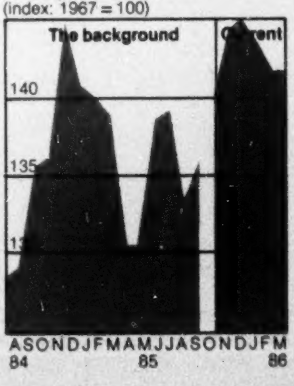
1. Sales optimism index
(% higher minus % lower)



2. Housing permits
(mil., seas. adj. annual rate)



3. Help wanted index
(index: 1967 = 100)



levels of late last year.

Even the trade deficit is showing signs of improvement. Imports in one recent month, for example, fell by nearly 10%. And while one month doesn't make a trend, two signs point to better days ahead: 1) manufacturing imports are at their lowest level in four months, and 2) manufacturing exports are at their highest level in six months.

Much of this trade improvement can be traced to the 30% drop in the dollar since early last year. But an added assist comes from lower-priced oil imports. The point to keep in mind: Last year petroleum accounted for 30% of our overall trade deficit—so lower oil prices here can make a big dent in our negative balance.

Driving costs

A caveat for fleet car managers: Don't base cost estimates on national averages.

Reason: Outlays can vary significantly, depending on where your plant or office is located. A new 20-city study by Hertz finds that costs for a new medium-sized or compact car (driven 10,000 miles per year and held for five years) can range from a low of 46¢/mile in some Midwestern cities to more than 60¢/mile in such metropolitan areas as Los Angeles, San Francisco, and New York. (See chart)

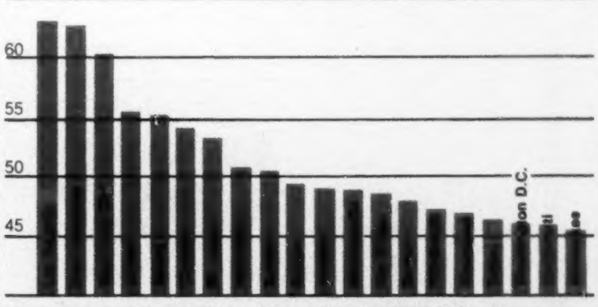
These latter three cities, incidentally, have ranked 1-2-3 for six straight years now. More important, their costs remain far above the 51.6¢/mile 20-city average and even further above the 47.6¢/mile national average which includes low-cost suburban and rural areas.

One key factor behind these city variations: The big differences in outlays for insurance licensing and fees—with costs per mile in this category running from a low of 10.4¢/mile in Cincinnati to 24.8¢/mile in Los Angeles. Significant differentials are also noted in maintenance and repair costs. San Francisco's peak 6.9¢/mile is nearly double Cleveland's 3.8¢/mile cost.

The new study also compares cost changes from year to year. The key finding here: Increases over the last year average out at nearly 4%, or 2¢/mile. But with gasoline (which accounts for more than 15% of total per-mile outlays) way down, a change is likely when the final 1986 tally is in—with the possibility of a fractional decline in overall costs.

Car driving costs*

A city-by-city profile



* Assumes new compact car driven 10,000 miles/year & held for 5 years.

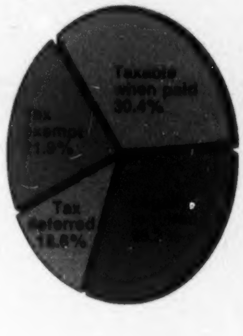
Source: Hertz

Fringe benefits: Still a big bite

By industry

Industry	% of payroll
Food and beverage	41.0
Textile and apparel	30.9
Paper, lumber, furniture	37.0
Printing and publishing	36.5
Chemicals	39.3
Petroleum	43.8
Rubber, leather, plastic	38.3
Stone, clay, glass	40.6
Primary metals	45.4
Fabricated metals	40.8
Nonelectric machinery	37.8
Electric machinery	37.6
Transportation equipment	39.3
Instruments	36.0
Non-manufacturing	34.8

By type of payment



Source: U.S. Chamber of Commerce

Fringes still a big chunk

Fringe benefits are still taking a big bite out of the average payroll dollar.

Though efforts to contain these outlays are intensifying, the overall impact has been negligible. According to a new survey by the U.S. Chamber of Commerce, some 36.6% of the typical payroll dollar (or $7,842 per year per employee) is still earmarked for these "extras." That's only a fractional decrease from the 37.3% peak back in 1981.

Moreover, in many industries the bite remains far in excess of 40%—with the biggest drains noted in primary metals (45.4%) and petroleum (43.8%). At the other end of the benefit spectrum are the service industries where only about 30% share of payroll is noted in the wholesale, retail, trade, banking, and hospital segments.

Other key findings of the study:

- Large firms generally pay higher benefits than smaller ones—with the 38.6% average for outfits with over 5,000 employees comparing to only a 33.9% figure for those with less than 100 on the payroll.
- Payments for non-government pensions are reported by 83% of the companies, with pension payments for these firms averaging 5.9% of payroll.
- Virtually all firms report payments for employee insurance programs—averaging 7.4% of payroll.

The study also provides some numbers on worker contributions: employee payroll deductions include 6.3% for social security, 0.1% for railroad retirement and state sickness benefits insurance taxes, 0.5% for pensions, and 1.5% for life, hospitalization, surgical and other insurance.

BUSINESS DATATRAK

CURRENT PRICES

Prices do a balancing act

Credit the continuing energy price decline for another sharp drop in the overall industrial price index.

Last month, for example, this bellwether yardstick of buyer procurement costs dropped 1.4% —a virtual repeat of the decline of the previous 30-day period. Price averages are now close to 3% under year-earlier levels.

Energy's key role in all of this can best be appreciated by looking at the energy and fuel subgroup. Prices here dropped by a big 10% last month.

The biggest individual energy drop occurred in gasoline—a 20% drop in just 30 days. But almost as big a plunge was reported in residual fuel oil (off 12%). Other decreases were noted in home heating oil, natural gas, diesel fuel oil, liquid petroleum gas, and electric power.

If you remove the energy effect, the picture is somewhat different. Nonenergy prices actually rose a modest 0.1%. This nonenergy uptrend is most clearly evident in capital equipment where prices advanced by an average of 0.3%. Light motor trucks and printing trade machinery sparked the boost. This more than offset continued easiness in office and store machines which fell by almost 1%.

Some component part items have also edged up over recent days—notably motor vehicle parts, hardware, and plastic parts and components. But again, there were offsetting declines—particularly in fasteners which fell by almost 1%.

Construction materials were mixed. Lumber, plywood, plumbing fixtures and brass fittings all rose. On the other hand, declines were noted in both gypsum and plastic plumbing products.

A similar indecisive pattern was noted in metals. Gold, platinum, aluminum, nickel, antimony, cadmium, and vanadium all advanced. Weakness appeared in molybdenum, tungsten, cobalt, tin, chromium, and selenium.

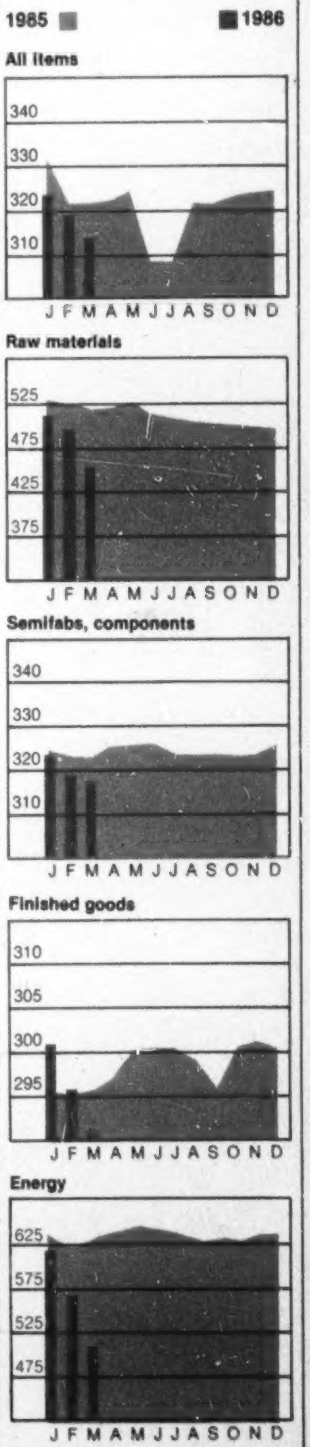
The chemical picture also suggests continued easiness. Specifically, reduced petrochemical feedstock costs caused a sharp 2.2% decline in organic chemicals—more than offsetting fractional

This month's breakdown

	Latest level (Mar.)	% change from: Month ago	Year ago
Bearings	354.2	0.2	2.0
Bolts, nuts, etc	275.4	–0.9	–0.9
Chemicals, inorganic	295.7	0.2	–1.6
Chemicals, organic	353.0	–2.2	0.1
Concrete products	325.4	–0.1	3.0
Corrugated cartons	263.8	–0.1	–8.0
Cutting tools, small	289.6	0.1	1.6
Electric lamps (bulbs)	351.5	0.6	3.2
Electronic components	200.1	0.4	0.7
Fans and blowers	363.0	0.2	1.5
Foundry and forge products	364.8	–0.1	0.6
Fuel oil (residual)	665.5	–12.0	–40.2
Furniture, commercial	315.4	–0.2	3.6
Gasoline	371.3	–21.5	–28.1
Glass, flat	229.5	–0.1	3.9
Glass containers	388.5	0.3	3.9
Gypsum products	351.1	–3.1	4.4
Hand tools	382.2	0.4	3.0
Hand tools, power driven	235.9	0.6	2.0
Industrial furnaces	394.9	–0.2	2.9
Integrating and measuring instruments	234.8	–0.4	1.2
Internal combustion engines	349.6	0.2	2.9
Lubricating oil	381.4	0.2	3.0
Lumber millwork	313.7	0.6	1.1
Material handling equipment	295.3	0.0	0.4
Metal containers	361.2	0.0	0.9
Metal mill shapes (nonferrous)	307.0	0.1	–1.3
Metal tanks	304.9	–0.3	–0.4
Motors and generators	349.3	–0.1	–0.1
Motor trucks	307.3	0.4	4.2
Office and store equipment	153.9	–0.8	0.3
Paperboard	266.1	1.3	–6.9
Paper boxes and shipping containers	265.7	–0.2	–4.1
Paper office supplies	236.9	–0.1	–1.5
Paint	280.0	0.4	1.8
Plastic resins	300.8	–0.1	–1.8
Precision measuring tools	268.3	1.1	2.6
Pumps and compressors	357.9	0.2	0.5
Refractories	373.2	0.1	1.7
Rubber belts and belting	337.5	–0.6	–4.5
Scales and balances	231.6	0.4	0.7
Steel products	345.4	0.1	–5.1
Switchgear	283.6	0.4	0.7
Textiles, synthetic fibers	151.5	0.7	–3.2
Textiles, gray fabrics	151.0	–0.3	–0.7
Tires and tubes	236.5	–0.3	–1.0
Transformers and power regulators	234.4	0.1	–0.2
Welding equipment	299.2	0.1	2.2
Wire and cable	206.5	0.0	1.8

Industrial prices

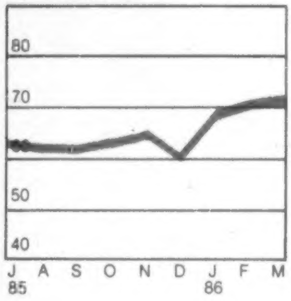
(Index: 1967 = 100)



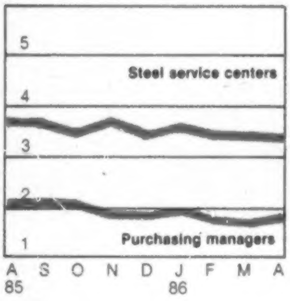
Source: Bureau of Labor Statistics

Steel

Operating rates

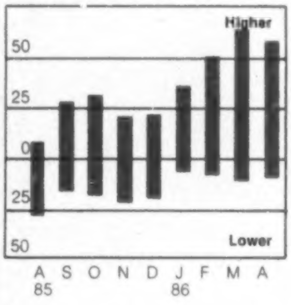


Inventories
(Months supply on hand)

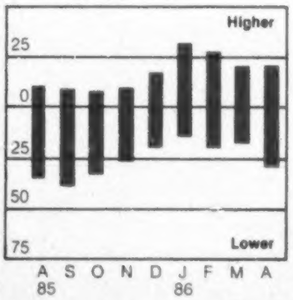


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer purchase



gains in the organic sector. Plastic prices have also begun to weaken a bit.

BLS officials, commenting on the latest price roundup, say that decreases in overall quotes should begin to bottom out this month. But they add that there is still no discernible sign of a major uptrend. As such they predict that averages will still be 1-2% under year-ago levels by the end of the second quarter.

STEEL SCENE

Hikes holding

A slight upward drift in steel prices in likely to continue—at least for another few months. So say distributors responding to the latest Steel Service Center Institute (SSCI) survey. 88% say they will be paying more for steel in six months than they are now.

But the increases are only expected to be in the tolerable 2-5% range. And there's evidence to support these projections. For one, new hikes have been posted on sheet products—the second such advance this year.

Similarly, a second round of increases may soon be shaping up in wire rod where an April $10-20/ton increase seems to be holding. Reason for the bullishness here: Rising order books have stretched leadtimes out to July.

Just how much will overall steel prices rise? It's hard to say because many buyers have long-term contracts that lock up prices through 1986. But right now, the concensus among experts is that mills will probably increase their 1986 realizations by about 5%—a very modest amount considering the price declines of the past few years.

Further evidence of an uptrend in prices comes from latest reports on import prices. With the dollar weakening, fewer service centers are reporting bargains. Only 60% of distributors responding to the SSCI survey now report lower overseas prices in carbon steel *vis a vis* comparable domestic metal. At the beginning of the year the figure was 87%.

Purchasing managers answering the latest N.A.P.M. Steel Buyer Survey tell much the same story. Some 68% of respondents now report lower foreign prices—considerably under the 80% reading at the end of last year.

It is not all that hard to explain this trend. With currencies (like the Japanese yen) as high as they are compared to the U.S. dollar, some overseas mills have suddenly been transformed into relatively high-cost producers.

Nevertheless, the volume of imports is expected to remain high—partly because many of our overseas suppliers are in countries where domestic currencies have not appreciated relative to the dollar.

Hedging is also to blame for high imports. If a new labor pact isn't signed soon, many buyers may be forced to commit for additional foreign metal.

Incidentally, some additional U.S. ordering may be taking place for the same reason—this is probably why demand has been holding up so well at a time when several major steel consuming industries have been taking a breather.

This hedge factor shows up in the findings that buyer inventories have edged up over the past month. But it is doubtful whether hedging will play a major role in the months ahead. More buyers now expect declines than expect increases in steel receipts over the next few months.

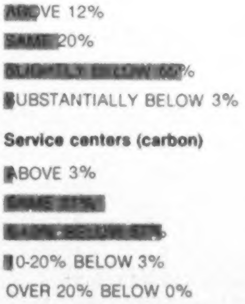
Steel service centers still see order increases, but there is a note of caution from Andrew Sharkey, SSCI president. "Capital goods, energy, and nonresidential construction remain soft—as evidenced by the flat shipping levels in structurals, plates, bars, and tubing," he warns.

Also indicative of distributor caution is the fact that many feel inventory levels are still too high. Indeed, the 29% who feel

Import prices
(Compared to domestic)

Steel buyers

Service centers (carbon)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

stocks are too high relative to current shipments far outweigh the 5% who feel that inventories are too low.

This caution on inventories is also becoming more apparent in the steel buying sector. Despite the fact that PMs have been adding to stocks, they eventually plan to reverse the trend. The evidence here is quite clear—36% of respondents note that inventories are too high relative to demand. And this number is even more dramatic when compared to the zero percentage who feel that stocks are too low.

PROCUREMENT STATUS

Few players in the waiting game

Some very moderate increases in leadtimes may be in the offing for a few product lines.

This is certainly true for some electronic component areas such as CMOS logic and MOS memory devices. And some steel and component part items are taking a bit longer to reach buyer production docks.

Not surprisingly, *PW*'s exclusive leadtime index again registered a 51—slightly above the neutral 50 level. This suggests that stretchouts are now somewhat in excess of shrinkages.

N.A.P.M.'s speed-of-delivery survey results tell much the same story. Specifically, the number of respondents reporting slower deliveries rose to 7% last month—far outweighing the miniscule 1% who noted acceleration. This is the first time in about a year and a half that the number reporting slowdowns dominated.

But it should be noted that the gap between faster and slower is still quite small. More important—there is still plenty of excess capacity around in semiconductors. Expected demand gains this year will recoup only about half last year's decline—a performance hardly calculated to press this industry.

What is true for semiconductors is probably also true in most other sectors. The typical American factory is still producing at only about 80% of capacity—far under the 85% + rate that traditionally has caused bottlenecks.

Why the modest leadtime stretchout? One PM explains that "Suppliers have been reluctant to staff up to meet increased demand. But from here on in I think you'll see a change—and very little further deterioration in delivery performance."

Current inventory policies also seem to confirm the fact that very few buyers are worried. Stock paring continues despite demand gains. The latest N.A.P.M. survey results find parers outnumbering accumulators by nearly a 2:1 margin.

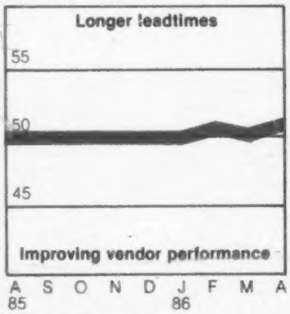
Other significant developments: 1) Only 12% of the respondents are committing 90 days or more in advance for their purchased materials—the lowest such figure in years, and 2) only one item (titanium dioxide) appears on the N.A.P.M. short supply list.

In short, all the signs indicate another problem-free year for industrial buyers—despite the fact that the economy is now well into its fourth straight year of recovery.

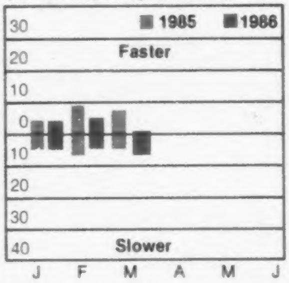
Monthly procurement status report

Leadtime index

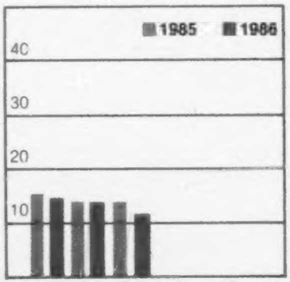
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



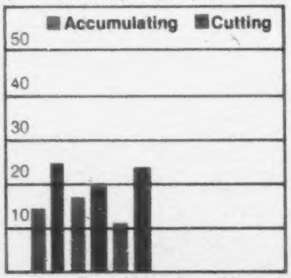
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Leads have dropped for electrical items, pipe valves, fittings, and mill supplies (waits are about 1-3 weeks). MOS semiconductors and ICs are also in (to 16-22 weeks). Cold rolled sheet holds (7-8 weeks), as do aluminum (12 weeks) and copper sheet (2-6).

Cleveland: Metals are easily available—alloying types are being shipped on demand. No problems for lumber either (1-3). Corrugated, folding boxes, polyethylene, and PVC all have 2-3 week leads. No problems with plastic packaging material or multiwall papers (4-5 weeks).

Los Angeles: A few double-digit weekly waits persist—in linear ICs (30), galvanized steel (12-14), stainless coil (12-14), and custom storage tanks. Elsewhere, relative ease is suggested by these short leads: Brass castings (4-6), aluminum tubing (6-8), standard fasteners (4), and lube oils (2).

Houston: Another month of basically unchanged leads. Examples: high pressure heat exchangers (4-8 mo.), motor control centers and

BUSINESS DATATRAK

power transformers (3-7 mo.), centrifugal compressors (10-12 mo.), pumps (4-7 mo.), corrugated (2 weeks), and component parts (1-8 weeks).

Philadelphia: A few MRO items are in—cutting tools and lubes (to 4-6 weeks), xerographic paper (stock to 4), special grinding wheels (12), special polishing wheels (14). Steel is holding steady, as are std. drills (2-4) std. taps (3-4), std. grinding wheels (4-6), and standard polishing wheels (2-4).

Pittsburgh: Packaging leads are holding at 4-6 weeks for bags, 3-4 weeks for corrugated and folding boxes, and 4-5 for wirebound boxes. No problems with drums (all at 1 week), lumber (3-4), and steel strapping (2-3). Also readily available: plastic resins (5-6) and paints (4-5).

Leadtimes (in weeks)

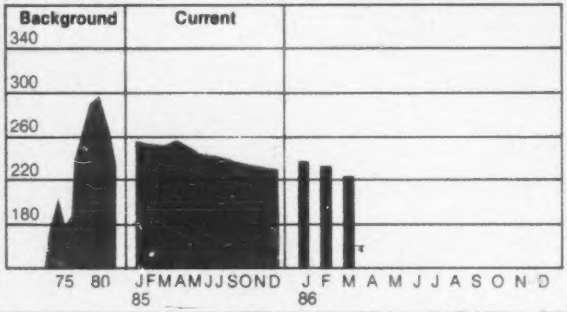
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	7½	6½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	2½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	4	3
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	6	6	8
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	9	9	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	13	13	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	11	11	11
Motors (Phil)	10	10	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	10
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	1½
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅓	⅓	⅓
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naptnalene (Chgo)	2	2	2
Paint (LA)	4	4	1½
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Clev)	2	2	1½
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2½	2½	3½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	3
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Clev)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	12	12	10
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	12	12	9
Brass Castings (LA)	5	5	5
Brass Rods (Chgo)	6½	6½	7½
Brass Sheet (Chgo)	4	4	5
Brass Tube (Chgo)	7	7	10
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	4½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	1
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	12	12	12
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	5	5	5
Fasteners, Std. (Phil)	1½	1½	2
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	33
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	2½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	15	15	15

BUSINESS DATATRAK

Raw material price barometer

(Index: 1967 = 100)

Latest month	222.6
Month before	233.3
Year ago	252.4



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	25.10
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	29.25
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	25.15	25.15	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.613	.590	.518
Antimony, in alloy, lb.	1.35	1.32	1.36
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.35
Brass, red, 85%, [sheet], lb.	1.32	1.32	1.32
Brass, yellow, [sheet], lb.	1.27	1.27	1.27
Cadmium, ton lots, lb.	1.15	0.90	0.95
Copper, electrolytic, wire bars, refd., lb.	.68	.68	.69
Copper sheet, over 24 in., lb.	1.41	1.41	1.41
Lead, common, N.Y., lb.	.190	.180	.200
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	265.00	240.00	300.00
Molybdenum, oxide, dealer, lb	2.65	2.75	4.23
Nickel, cathode, dealer, lb.	1.86	1.90	2.36
Platinum, dealer, oz.	402.00	403.00	260.00
Silver, N.Y., oz.	5.17	5.56	6.74
Tin, Straights, N.Y., lb.	2.70	4.55	5.27
Zinc, Prime West, East St. Louis, lb.	.33	.34	.47
Zinc, die casting alloy, No. 3, lb.	.415	.415	.535
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.40	16.35	16.25
Shipping sacks, ton	390.00	390.00	440.00
Solid bleached paperboard, ton	550.00	550.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.228	.222	.361
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.045	1.045	1.030
Cotton middling, 1", N.Y., lb.	.630	.620	.636
Printcloth, 48", 80x80, N.Y., spot. yd.	.65	.64	.65
Army duck, 37", 13 oz., yd.	1.48	1.48	1.70
Blended printcloth, 64", 78x54, yd.	.72	.73	.73
20s combed yarns	2.05	2.05	1.95
Wool tops, N.Y., lb.	1.80	1.80	2.10

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.455
Ammonia, anhydrous, tanks, Gulf Coast, ton	165.00	N.A.	N.A.
Benzene, petroleum, tanks, Houston, gal.	.67	.93	1.45
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.86
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.52	.52	.54
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.270	.270	.305
Polyethylene resin, low density liner film grade (market place), lb.	.345	.320	.280
Polypropylene, homopolymer grade (market price), lb.	.37	.36	.33
Polystyrene, general purpose grade (market price) lb.	.33	.35	.34
Polyvinyl chloride, pipe grade (market price) lb.	.305	.290	.330
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.21	.26	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb.	.73	.73	.69
Xylene tanks, gal.	1.36	1.36	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	307.20	305.20	302.00
Lumber 2x2 pine, mbf, cl	305.35	296.65	300.35
Plywood, plyform, ¾", msf, cl	590.60	566.65	570.20
Plywood, ⅝", msf, cl	381.20	375.05	372.10
Cement, bulk, ton, tl	65.84	66.07	64.76
Sand, ton, cl	6.46	6.42	6.21
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.33	48.21	47.39
Crushed stone, 1½", ton, cl	7.92	7.84	7.57
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.83	0.82	0.79
Gypsum sheathing, ½"x1"x8", msf, tl	213.87	210.17	206.44
Brick, common, per thousand, tl	186.71	185.71	179.89
Asphalt paving, AC-20	167.53	172.31	175.08
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.07	7.07	7.22
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	10.50	12.25	23.85
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	16.50	19.00	29.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.585	.455	.855
Gasoline, 94 oct., reg., Chi., tank car, gal.	.435	.398	.810
Heating oil, No. 2, Chi., bulk, gal.	.590	.440	.765
Heating oil, No. 2, N.Y., bulk, gal.	.450	.605	.808
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.400	.468	.743
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.290	.330	.355
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	74.00	74.00	85.00
Steel, No. 1 hvy., dlvd., Chi., ton	73.00	73.00	79.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.580	.605	.575
Copper, No. 2, East, wholesale, dlvd., lb.	.500	.525	.500
Brass, red, East, wholesale buy, dlvd., lb.	.540	.565	.535
Brass, yellow, East, wholesale buy, dlvd., lb.	.300	.300	.350
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.390	.375	.325
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.415	.400	.345
Zinc, old, East, wholesale buy, dlvd., lb.	.150	.150	.140
Lead, clean solids, East, wholesale buy, dlvd., lb.	.105	.100	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	12.00	10.00	15.00
Paper, old corrug. box, dlr., N.Y., bon	12.00	10.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.11	.11	.10
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.125	.130	.280

[Sources: **Metals Week**, **Engineering News-Record** (20-city averages), **Platt's Oilgram Price Service**.]

Photo courtesy of Alcoa-Metal Box

High-clarity STEP plastic containers are heat retortable up to 250 F and compatible with existing filling and closing equipment.

Lid to stay on packaging prices

Robert S. Reichard, executive editor

Packaging buyers can continue to smile about the price picture through this year. Factors such as more-than-ample capacity, relatively low material input costs, and cutthroat competition—vying for the $70 billion-plus U.S. market—will hold the overall average increase to about the same level as the subdued general inflation rate.

But a repeat of 1985—when weaknesses in corrugated and other products kept price averages from rising—is unlikely. Expect only modest increases though.

This is what buyers told ***PurchasingWorld*** in a our latest nationwide packaging survey. One PM sums it up this way: "We don't anticipate any serious problems. As of now we're looking for only a few percentage points rise in overall packaging costs—and hopefully even that can be postponed until after mid-year."

Here are some of the more specific findings of the ***PW*** survey:

- **Prices:** The average increase for the entire year is projected at 2.7%—up from a nearly flat pattern in 1985. Keep in mind this is only an average. A solid 30% of the surveyed buyers feel that because of competitive pressures they may be able to hold their costs at or below last year's level.

Buyer comments point to a mixed price picture because of continued easiness and/or discounting in such key packaging sectors as corrugated cartons, folding boxes, plastic bags, resins, closures, and metal drums.

Even the advances that are anticipated in some lines are relatively small. For instance, the typical increase in corrugated boxes for 1986 is estimated at no more than 5%. For many buyers, that would still leave the price of this important product line under 1984 levels when linerboard and corrugated first began to weaken.

- **Demand:** The projected average gain of about 2-3% for this year is about in line with 1985 figures—at least as far as the overall packaging mix is concerned. If this happens and if prices rise a bit as expected, total packaging outlays this year could approach $75 billion.

This, in turn, indicates that packaging will continue to maintain its importance in the overall purchasing mix. On this point, a Frost & Sullivan study puts packaging's share of GNP at nearly 1.8% of GNP—still in the narrow 1.8-2% range that has held since 1980.

- **Availability:** Not much worry here considering there are: (1) ample supplies of paper, metal, glass, and plastics; and (2) excess converting capacity. But some buyers expressed concern about possible strikes at suppliers' plants. And there were scattered mentions of tightness in a few areas—notably specialty beverage bottles, safety closures, and special shock mounts.
- **The changing mix:** Survey findings also reveal plenty of new developments and strategies aimed at keeping a lid on overall costs. Increased emphasis on plastic forms is high on the list and that is expected to erode some of the traditional markets for metal, glass, and paper packaging.

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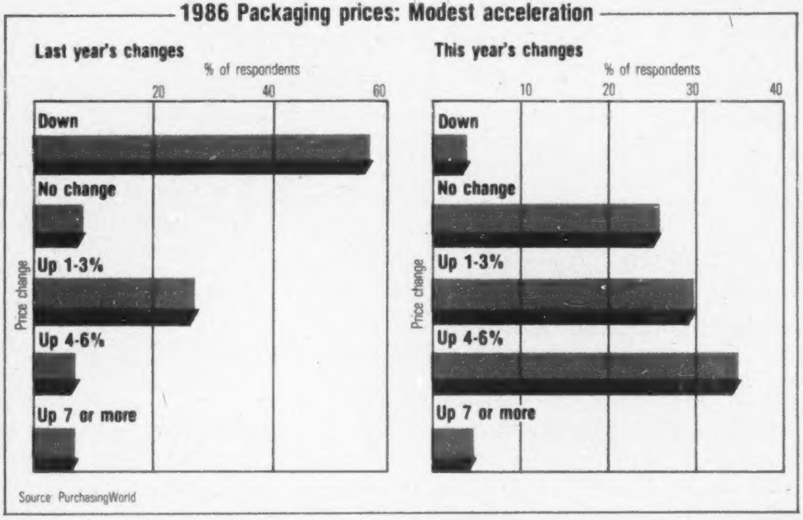


1986 Packaging prices: Modest acceleration

Source: PurchasingWorld

Aluminum, for one, faces new challenges from plastic food trays and plastic cans—both of which have been hitting supermarket shelves in recent months. And plastic's threat to glass bottles continues to grow. A new Chase Econometrics study indicates that versatile synthetics could capture as much as 35% of the soft drink market by the mid-1990s.

Paper is taking its licks, too. Replacement of paper bags is, of course, the key trend, but it is not the only one. Plastic corrugated, for example, would be used as a one-for-one substitute for paper using the same construction, but with improved qualities, and aimed at the same market.

New plastic-for-paper moves are also apparent in heavy industry. Detroit is ready to replace small corrugated cartons (used for nuts, bolts, and small parts) with new plastic returnable cartons—a move that could pay for itself after four or five uses.

The auto industry's commitment to using "returnable containers" will dramatically cut into corrugated use.

But substitution isn't the only strategy impacting this dynamic industry. Redesign and use of thinner gauge materials are significant factors in cost-conscious buyers' strategies. And every indication is that 1986 and 1987 will yield even more payoffs in these two areas.

The increasing enlistment of vendor help to critique current packaging efforts and to come up with cost-cutting ideas is also having some significant long-range impact on the way the industry and buyers are doing business.

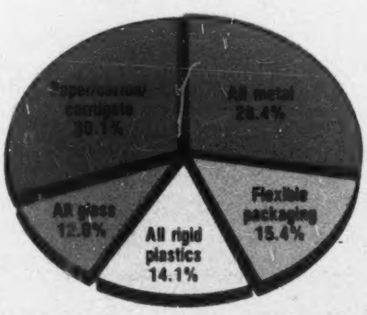
This doesn't exhaust the list of possibilities. Packaging buyers say they are stressing increased standardization of their packages, more use of long-term contracts, extended price guarantees, broader vendor bases, and the shifting of the inventory burden onto suppliers. One PM tells of hiring a consultant who developed a corrugated price formula which eventually resulted in a 40% reduction in his costs.

Key packaging modes

With all these forces buffeting the industry in mind, here's a detailed rundown of what's happening in each key mode—starting with paper, which accounts for more than 30% of total packaging outlays.

How the packaging market splits up

(% of overall packaging outlays)



Source: Frost & Sullivan

- **Corrugated cartons:** Shipment volume should advance about 2.5% this year—reaching a new record of 272 billion square feet—well above 1985's relatively flat pattern of 226 bsf. Prices could climb a bit. But because operating rates for linerboard (the key raw material) are expected to remain in the relatively low 91% range—well under the 97% reading of 1984, the hikes should be very modest. The long-term growth rate will also average out around 2.5% a year—with board capacity expected to keep pace.
- **Folding boxes:** Last year's 1% drop in shipments will give way to about a 2.5% increase in the current year, with totals advancing to 2.77 million tons. In the long run, only about a 1.2% annual rate of growth is forecasted—bringing the total usage to nearly 2.9 million tons by 1990.

This industry will also place more emphasis on quality and appearance improvements of its products through better design and graphics. There will be more emphasis on raising productivity by (1) improved equipment for cutting and creasing after printing, (2) infrared ink-curing systems to reduce the delay between carton printing and cutting/creasing, and 3) automation and computerization in manufacturing and distribution.

- **Set-up boxes:** Two years of declining demand will finally give way to a 1.5% increase in shipments for 1986. This reflects improved consumer disposable income which, in turn, should stimulate purchases of luxury non-durable goods that are generally packed in rigid boxes.

In the longer run, shipments are forecast to increase by about 1% annually through 1990. Growth markets include packaging for cosmetics, pharmaceuticals, confectionery, and electronics. Competition from other packaging forms will continue, but the industry is expected to retain most of its share of market for high-value specialty items.

...continued

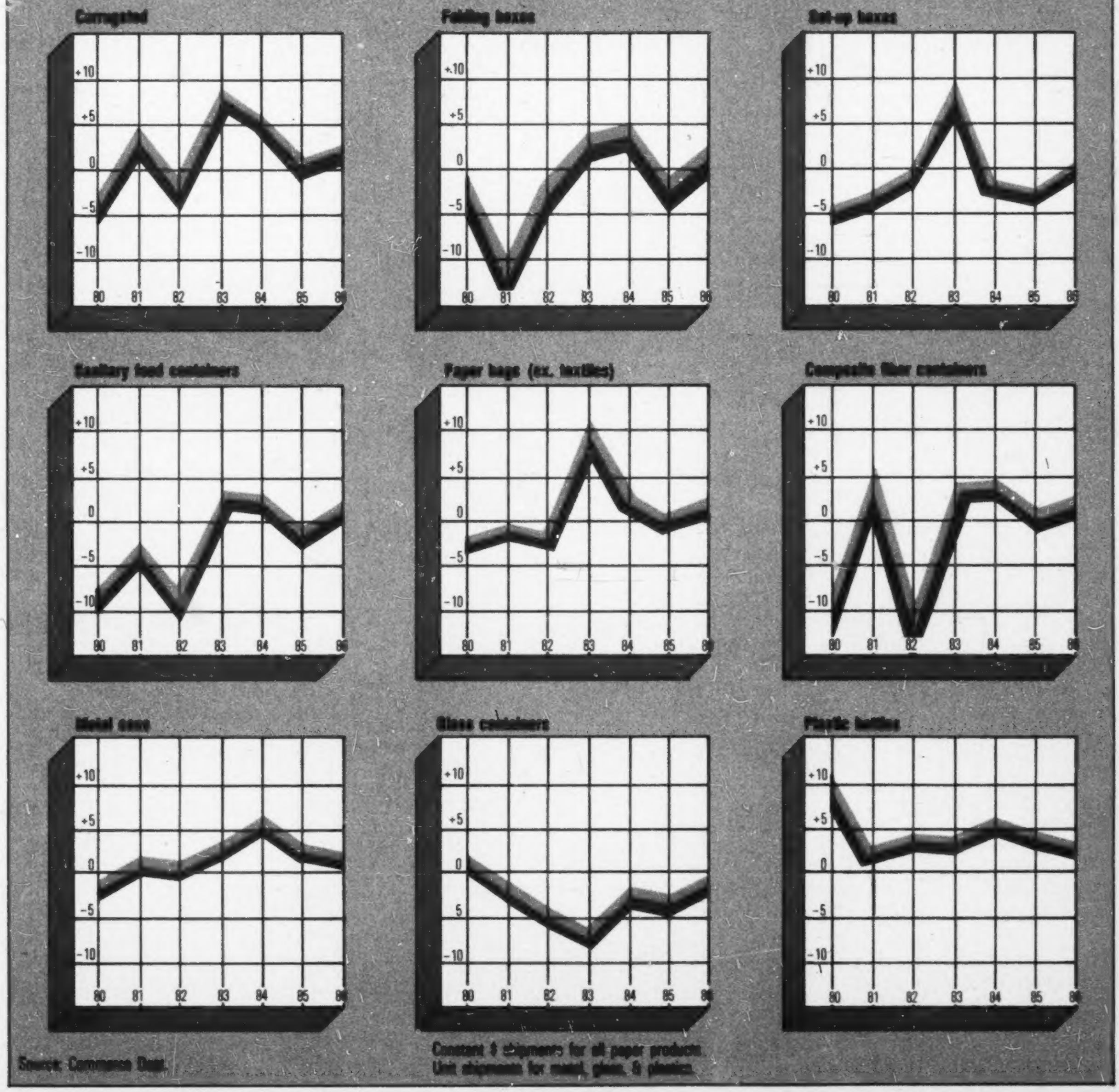
- **Sanitary food containers:** Real shipments are expected to climb about 2% this year—more than offsetting last year's decline. Sales of paperboard milk containers will increase at the expense of plastic. And aseptically packaged juices and drinks should continue to grow. But aseptically packaged, flavored milk shipments will lag, constrained by hard-to-change consumer buying habits and tastes.

A 2.2% annual growth rate is seen through 1990 for these packages. But this figure assumes a continued growth in fast food and convenience food services. Aseptics will continue as the industry's growth leader—with a greater diversity of foods and beverages contributing to the gain. Also, plastics will compete strongly with paperboard in most areas, including aseptics.

- **Bags and sacks:** The real value (both paper and nonpaper constructions) should climb 2.5% this year. Plastics will continue to make inroads into the grocery bag and sack market—capturing as much as 30% of real value of shipments this year.

Packaging demand trends: A mixed bag

(% change in real volume from previous year)



Corrugated

Folding boxes

Set-up boxes

Sanitary food containers

Paper bags (ex. textiles)

Composite fiber containers

Metal cans

Glass containers

Plastic bottles

Source: Commerce Dept.

Constant $ shipments for all paper products.
Unit shipments for metal, glass, & plastics.

The longer-run outlook—1986-90—is for about 2% average annual gains—with much of that growth in heavy-duty bags and sacks, and in specialty liners. By 1990, plastics should have about half of the bag and sack market.

Other growth areas over this period include plastic shrink and films used to bundle heavy-palletized loads. Retort pouches will also begin to show some growth, but will still fall short of industry expectations.

- **Fiber cans and drums:** Count on about a 2.2% increase this year. The most significant advance will be in composite cans and fiber drums, despite continuing competition from plastic alternatives.

A somewhat higher 2.5% annual rate of growth is seen for the 1986-90 period, with composite cans penetrating new markets, especially in the non-food areas. Also, fiber drums will make further headway against metal drums, but will lose some to plastic varieties.

- **Metal cans:** A modest 1% increase in demand is forecast for the current year—most of which will be in the aluminum-dominated soft drink area. By contrast, food can usage could fall further as demand for convenience frozen foods reduces the market for steel cans. A total of 102.5 billion units should clear the market this year, with aluminum accounting for two-thirds of the total volume. Prices could inch ahead, too, with perhaps as much as a 3% advance possible.

It doesn't seem likely there will be any speedup in the long haul, as market saturation continues to hold gains down. Expect no more than about 1% annual gains. Some challenge in the food market is also ex-

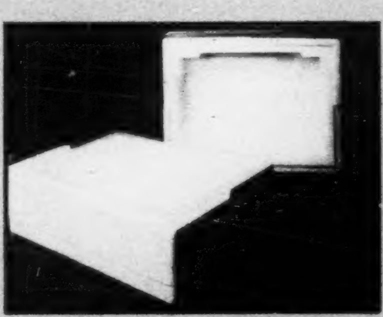
Check it out

- **Packaging Services Industries,** a Bemis Company, offers case imprinters capable of printing logos, art work, product identification, lot numbers, private labels, and promotional data on up to four sides of corrugated cases at speeds up to 40 cases per minute. **Circle 9**

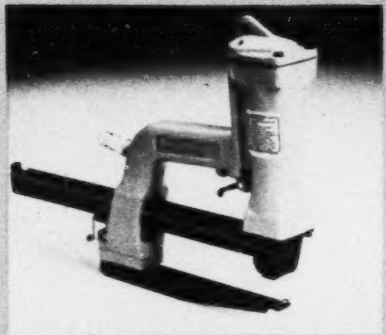
- **Owens-Illinois Inc.** Brochure on "Corrugraphics—The Guide to Powerful Packaging" tells how to turn plain, brown corrugated shipping boxes into superior, full-color marketing tools. **Circle 5**

- **Contex Graphics Systems Inc.** automates the creation of packaging graphics from concept all the way to color separations. Firm is joint venture of Continental Can and Scitex America. **Circle 4**

- **Klearfold® Inc.** Three full-color sheets, printed on heavy coated stock for filing show 36 different styles of folding cartons that can benefit from firm's Duofold® packaging. Duofold combines transparent soft creased rigid vinyl with paperboard or other materials in one integral structure. **Circle 7**



- **ARCO Chemical Co.'s ARSAN™** moldable resilient resin has been selected by the Ames Div. of Miles Laboratories to protect an expensive glucose testing kit. **Circle 6**



- **Bostitch.** Model P50 pneumatic stapling plier closes end inserts of corrugated containers firmly. Heavy-duty air tool drives staples in leg lengths of ⅜ in. to ⅝ in. to penetrate and securely fasten up to two thicknesses of double-wall, AB flute, 500-lb test board or four thicknesses of single-wall, C flute, 275-lb test board. **Circle 8**

- **Stone Container Corp.** lays claim to being "number one" producer of containerboard, corrugated containers, and kraft paper with $426 million purchase of three containerboard mills and 52 converting plants from Champion International Corp. Firm is already largest producer of paper bags and sacks. **Circle 3**

- **U.S. Can Co.** is first to use laser welding of steel aerosol can bodies commercially. The side seaming process, never used before in the industry, is running at the rate of 215 units a minute in the popular 4 13/16 in. high can size. The firm's goal is to reach the speed of 430 cans a minute within a year. **Circle 10** pected from coextruded plastic bottles and multi-layer thermoformed plastic containers. But metal cans should continue to dominate this area of food packaging.

- **Glass containers:** Unit shipments are forecast to decrease 2% this year. That will be the sixth straight year of declines. And competition from aluminum cans in the beer market and plastic bottles in the soft drink market will continue to hold back growth and limit price increases.

The demand downtrend is expected to continue in the long term—with about 0.5% a year shaved off shipments though 1990. But the decline won't be as steep as in the past because the industry is consolidating, reducing costs, and exploiting markets where it has a competitive edge.

- **Plastic bottles**: Bigger-than-average gains are continuing into the current year when sales are expected to reach 18.7 billion units—up 3.3% from 1985 levels. The half-liter soft drink market represents the major growth potential, although advances here are still limited because current technology cannot ensure positive carbonation retention in small bottles.

The following years also promise good demand gains—probably 4% annually. The big potential is in the half-liter soft drink bottle, as mentioned, and in coextruded and multilayer plastic food containers.

PW

What to look for on boxes

Emphasis is on design and enhanced graphics in multi-ply boxes. Developments to watch include increased use of flexography in color printing, further improvements in graphic design, greater use of preprinted linerboard, further computerization of plant operations, better marketing and distribution methods, modifications of existing box specifications for strength, improved coatings and adhesives, and an increased number of corrugated/plastic combinations.

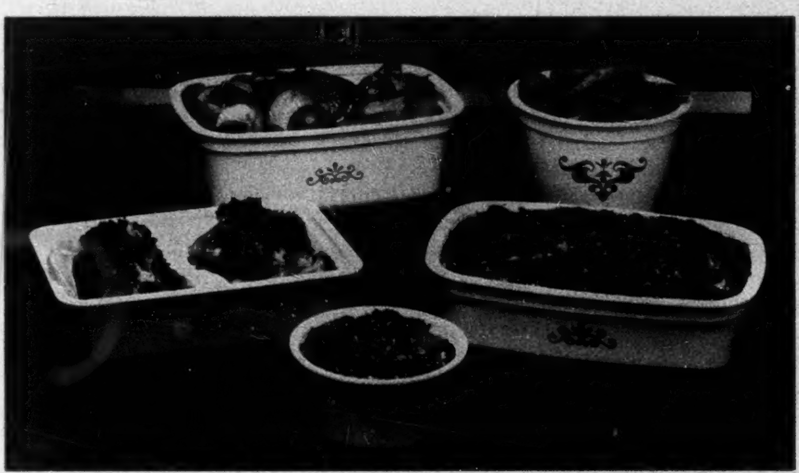


Photo courtesy of Alcoa-Metal Box

Lamipac containers are heat retortable and microwaveable and will provide shelf life up to two years, say joint venture partners Alcoa and Metal Box.

Alcoa in joint venture to make plastic cans

If the containers of fruits and premium vegetables found on page 56 of this packaging report look surprisingly like cans, maybe it's because they are just that—plastic cans. They're called STEP containers and they will be produced in this country through a joint venture between Alcoa and Metal Box America Inc., a Westport, CT-based subsidiary of the British firm Metal Box p.l.c. of Reading, England.

The British parent developed the plastic barrier package technologies used in the containers. The barriers help prevent migration of oxygen, moisture, and carbon dioxide through the container wall, thus preserving product freshness. The containers may be used for nuts, snacks, pastas, and other dry food products as well.

Initial focus of the joint venture will be to make four new food packages with the ability to withstand the high temperatures required for hot filling, retorting (in-plant cooking), and reheating. Several of the packages will be microwaveable (the wave of the future?) and one can also double as a serving dish.

The new packaging products fall into four categories:

- Lamipac heat retortable and microwaveable plastic containers which provide shelf life of up to two years without refrigeration for entrees such as meat, fish, and pasta-based products, and side dishes such as premium vegetables, desserts, and other foods. The high-barrier thermoformed containers are made from coextruded multilayer plastic sheet.
- High clarity or opaque plastic STEP containers, made of polyethylene terephthalate (PET), are heat retortable up to 250°F, and are compatible with existing filling and closing equipment.
- Oriented polypropylene barrier bottles and jars which have high-contact clarity and hot fill capability for packaging ketchup, mustards, sauces, pickles, mayonnaise, jams and jellies. The oriented polypropylene containers also provide extended shelf life with good resistance to oxygen, moisture, and essential oils.
- Aseptic packaging systems which use preformed microwaveable plastic containers for shelf-stable packages of dairy products, fruit juices and soups that require no refrigeration.

The Alcoa-Metal Box joint venture is a fifty-fifty proposition with about $100 million in capital investment planned for the first three years. Plants to produce the containers will be built in various parts of the country. For information **Circle 298**

Oil cuts to spur GNP, impact prices

While the current price is well below the $18/bbl assumption, the overall average price of crude could approach that figure—as prices slowly begin to recover in late 1986 and 1987, reflecting stronger demand and anticipated cutbacks in oil production.

How will sharply lower oil quotes affect the prices of chemicals, metals, and machinery? And what impact will they have on overall growth and on the demand for individual product lines?

Analysts at Wharton Econometrics—aided by their sophisticated computer models—have come up with answers to these and other questions of interest to PMs. In a report prepared especially for *PW* readers that assumes oil will settle at around $18/bbl, here is what they see ahead:

- **Overall growth:** Cheaper oil could add 0.9% onto real GNP this year and 0.6% in 1987. For industrial production, the increments are 1.6% and 1.4%.
- **Industry-by-industry growth:** The big gainers will be housing, autos, and machinery. Advances in these sectors will generate demand for steel, nonferrous metals, tires, plastics, lumber, structural metal, carpeting, and appliances. The few losers are petroleum, and interest-insensitive products: food and clothing and their basic raw materials.
- **Inflation:** The cost-of-living will probably drop about 1% in both 1986 and 1987. Industrial producer prices can be expected to dip 0.7% this year and 0.9% next year.
- **Interest rates:** Both long and short term rates should fall about 100 basis points (one basis point is 0.01%) because of both lower inflation premiums built into pricing and presumed easing of monetary policy by the Fed to keep the fragile banking system afloat.
- **Other probable pluses:** Faster economic growth will permit bigger tax collections. In addition, lower inflation suggests that Uncle Sam's procurement outlays can be cut without the government receiving fewer products. This could mean that the federal budget can be significantly smaller in 1987.
- **Long term impact:** If oil prices stabilize at $18/bbl, real GNP will average 1% higher for each of the next 10 years, with inflation running about 1% lower. Lower oil quotes also mean increased productivity—as investment is shifted away from energy-saving capital and toward labor saving investments.

Averages, of course, tell only part of the story. Of equal importance to purchasing execs is what happens to individual product lines. Under-a-dollar gasoline prices are already a reality and you can expect to see almost all other sectors follow the same degree of price deceleration.

This is clearly confirmed by Wharton computer runs which suggest a mixed price pattern. As analysts from the Philadelphia-based economic consulting firm explain it:

Two basic forces will be operating, but in opposite directions. Specifically, lower oil input prices will put downward pressure on quotes, while increased demand will work to push prices up.

The Oil Price Impact

On Prices

(% change in producer prices)

	1986		1987	
	Pre-oil Price Cut	Now	Pre-oil Price Cut	Now
All Indust. Commodities	1.6	0.9	2.8	1.9
Energy	1.4	−0.8	3.7	1.1
Chemicals	1.5	0.4	2.6	2.4
Rubber & Plastics	0.7	0.4	1.9	1.9
Lumber & Wood	−0.8	−1.2	1.9	1.7
Pulp & Paper	1.1	0.9	2.2	2.2
Metals & products	1.0	0.6	2.3	2.0
Machinery	1.0	1.1	2.3	2.5
Furn. & Household Dur.	1.3	0.9	1.9	1.7
Non-metallic Min.	3.1	2.3	3.7	3.3
Transp. Eqpt.	2.2	2.7	3.6	3.9
Textiles & Apparel.	0.7	1.0	1.5	2.5

On Demand

(% change in industrial products)

	1986		1987	
	Pre-oil Price Cut	Now	Pre-oil Price Gut	Now
Overall Indust. Commodities	1.5	3.1	3.5	4.9
Transp. Eqpt.	1.6	6.2	4.5	4.1
Autos	5.3	3.1	6.2	2.6
Non-elec. Mchy.	3.7	5.9	7.2	8.8
Elec. Mchy.	0.4	2.2	5.6	6.8
Primary Metals	0.8	4.4	2.9	5.7
Textile	3.1	5.4	3.1	3.8
Apparel	−0.2	1.9	1.3	2.6
Paper	2.9	4.2	3.2	4.4
Chemicals	2.1	3.8	2.8	4.2
Lumber	3.0	5.5	2.4	3.1
Rubber & Plastics	3.5	6.0	4.9	5.7

Source: Wharton Econometrics

In general, finished goods will experience the enhanced demand most quickly and, in some cases, will boost prices more than they would with higher oil tags. On the other hand, more basic goods will be dominated by reduced input costs which should put downward pressure on prices.

The biggest negative effect of lower oil prices will be in crude materials where processing costs will tend to dominate. Obviously, energy goods are included in this group. All oil-based fuels will show markedly lower prices and other fuel types will experience tough competition in markets where fuels can easily be substituted.

Other basic materials—such as metals, non-metallic minerals, and lumber—will have sharply lower energy costs. In addition, increased demand from consumers and business takes a while to feed through into better markets for these basic goods. So there will be little upward price pressure from the demand side.

Another type of commodity where lower oil prices should pass through directly to consumers is chemicals.

Historically, chemical price changes have been in the same direction, although not as large, as energy prices. Reason is that in the production of these products, feedstock outlays predominate over labor and other costs. And this relationship is likely to hold true over the next few years.

Offsetting lower prices for these commodities are others where demand increases overpower input costs as the key price determinant. Autos, some home goods, and machinery will probably have slightly higher prices than they would have if the sluggish demand expected before the stimulus of lower prices materialized.

Take a look at the "before and after" output estimates in the table if you have any doubt of the extent of the greater demand anticipated in these sectors. While overall production is expected to rise only 1.6% this year, the auto swing will be a lot bigger, with the pre-oil-price-cut projection for a 5.35% decline in 1986 giving way to a 3.1% increase.

That's a swing of 8.4%. Put another way, half million more cars will be sold in each of the next two years than would have been possible if oil had stayed at $26/bbl.

And in the nonelectrical machinery sector, earlier projections for 3.7% and 7.2% production gains in 1986 and 1987 have now given way to revised estimates of 5.9% and 8.8% advances. As Priscilla Luce, director of Wharton's Industrial Analysis Group puts it: "Because of initially lower interest rates and early expansion in the consumer-based sector, demand for machinery will build to a level substantially higher than otherwise would be expected by the middle of next year."

To sum up: The oil price decline looks good from almost every vantage point, though, admittedly, care will have to be taken to see that some hard-hit banks (those with portfolios dominated by oil and energy-related loans) can ride out what for them may be a relatively rough period. **PW**

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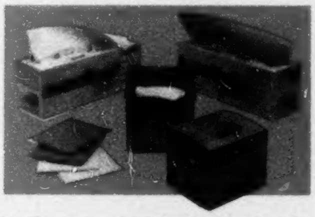

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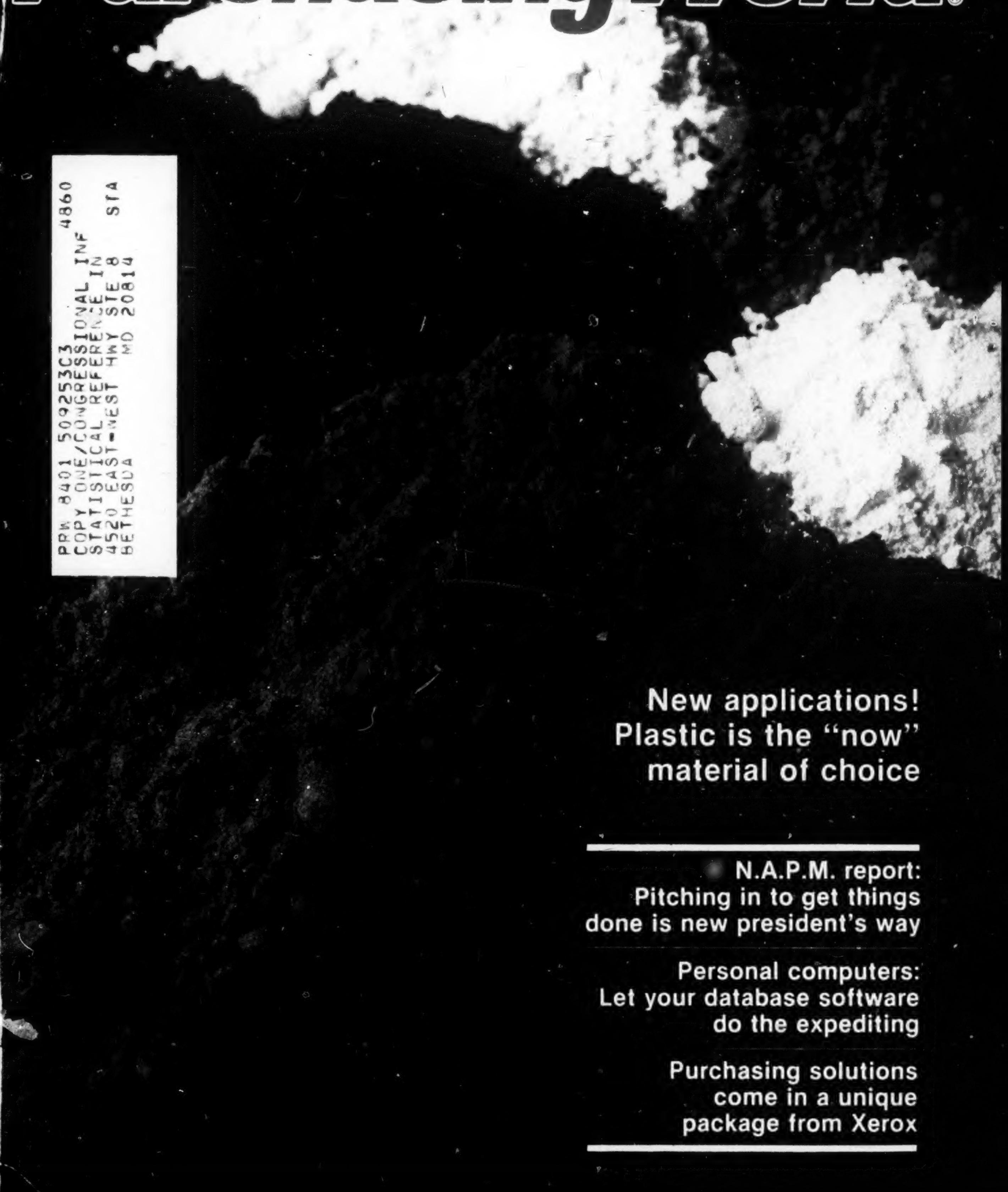

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June 1986 Vol. 30 No. 6

Special report: Plastics

66 New applications!
Plastic is the "now" material of choice
Despite big demand, buyers are benefitting from new formulations and plenty of capacity.

Features

26 PMs pull back reins on prices
PW's exclusive survey of the month indicates that PMs are revising their estimates of procurement costs downward for this year.

34 Down go the increases
The latest quarterly transportation forecast prepared exclusively for *PW* by Wharton Econometrics indicates freight tabs will increase by only 2.3% rather than the 4% forecast a quarter ago. And next year looks almost as good.

57 John Pughe: a pitch-in president
Meet N.A.P.M.'s new president in this close-up profile.

59 N.A.P.M. takes Atlanta, cedes city to Coca-Cola
If you missed N.A.P.M.'s 71st annual international conference, you missed a lot. Here are the highlights.

61 Purchasing solutions come in a unique package from Xerox
Xerox's new Integrated Purchasing Management system automates the entire purchasing function from requisition to final payment.

72 "Time definite" means delivery when you want it
Pilot Air Freight's Freightsaver offers a unique approach to consolidation and distribution of small, high value, time sensitive shipments at significant savings.

86 New technologies power lift trucks
In the hot materials handling market, companies are having to look for new technologies and new strategies to keep hold of their markets.

96 Enter *PW*'s Crystal Ball contest
Predict the outcome of the 1986 economy and win a personal computer.

Cover photo courtesy of Borg-Warner Chemical Co.

86

PW
Crystal Ball
Contest

96

Departments

4 PW Pointers
6 Editorial
8 PW Predicts
17 Datatrak
27 Pinkerton on PCs
28 Law
32 Negotiations
36 Transportation Report
79 Products
78 Sample Pak
81 PW Office
95 Ad Index, Classified

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PW PREDICTS

Oil declines mask some increases

The price declines of the past few months won't last much longer—quotes will begin to rise by early summer.

All the slippage noted over the past few months can be traced directly back to the sharp drop in oil tags. And while these energy quotes are not likely to rise, they are now about as low as they are going to go.

Equally important, these energy declines have been masking continued inflation in other sectors. A closer look a some of the nation's key price yardsticks makes this clear:

- **Producer prices:** March data shows the overall finished goods price index falling 1.1% on a seasonally adjusted basis. But eliminate oil, and the index is up 0.5%.
- **Cost of living:** Again using March data—a 0.4% decline in the all-inclusive index turns into a 0.3% increase when energy is removed. Some items such as foreign cars, insurance, and medical services are up a lot more than that.
- **Import prices:** Our heavy dependence on overseas oil really distorts this yardstick. While the overall import index dropped a hefty 6.1% during the first quarter of 1986, most key industrial sectors (excluding oil) actually sported big advances—4% in the case of machinery and transportation equipment and 3.8% for non-fuel raw materials.

In short, non-energy price performance isn't much different from last year—prices continue to creep slowly upward. This pattern should continue. There could be some modest uptick as the economy moves into the "mature" stage of the business cycle—a period when price hikes generally begin to accelerate.

And, the sharply depreciated dollar (down 30% *vis a vis* other currencies over the past year or so) also has to be factored into the price quotation. In fact, higher import quotes are already quite apparent, particularly in non-fuel items in the first quarter.

These import price hikes, in turn, must eventually effect the nation's general inflation rate. Right now, foreign goods account for 26% of the U.S market for all goods except farm and oil—double the share of a decade ago.

How much of an impact will this make? One rule of thumb is that each 10% decline in the dollar adds 1% onto the general inflation rate. Superimpose this on the 30% decline of the dollar to-date, and 3% will eventually be added onto the inflation rate.

Other factors could lift price levels as well. Labor costs, for example, are advancing at a 4% annual rate—while manufacturing productivity is increasing by only 1%. The implication is that unit labor costs are now probably increasing 3% a year.

While there is no reason to expect an inflationary spiral around the corner, modest prices are inevitable. A new nationwide *PW* survey seems to confirm this. PMs are now betting on a 2.5% average increase for 1986.

Econometric models suggest much the same pattern. Wharton Econometrics is currently projected at 3.3% increase in the overall GNP price deflator by the first half of 1987.

Industrial fastener forecast

Mechanical fastener markets, coming off a relatively buoyant 1985, can probably look forward to good-sized demand gains for at least another four years.

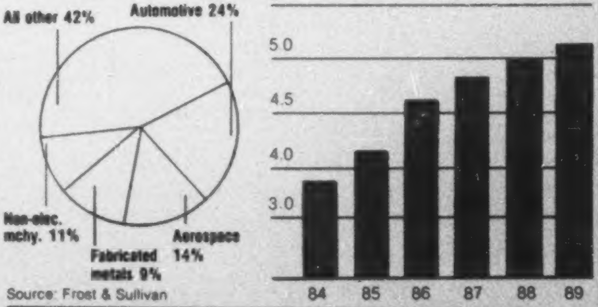
A new Frost & Sullivan study suggests that constant (1984) dollar sales of these fasteners (bolts, screws, nuts, etc.) will be rising at near a 6% annual rate through 1989. By 1989 these constant dollar totals could be up above the $5.1 billion level—far outdistancing the $3.8 billion figure of 1984.

Externally threaded fasteners will account for most of this volume. Bolts, growing at an 8% rate, will show the biggest gain since the industries using these types (heavy machinery and construction equipment) finally seem ready to snap out of their long recession.

On the other hand, internally threaded fasteners and non-threaded and specialty types show the poorest prospects. Gains will average out at only 3.5% annually. Several factors are behind this lag: continued competition from imports, the industry trend to eliminate nuts and special fasteners where possible, and the growing use of other joining techniques such as adhesives.

Here's a look at end-use markets: automotive (which accounted for 24% of total sales in 1984) will continue to be the biggest consumer—purchases will hit $1.2 billion by 1989. But aircraft/aerospace buys will approach $0.9 billion by 1989. Electronic industry applications will come in a close third.

Industrial fasteners: A market profile



Source: Frost & Sullivan

Textiles

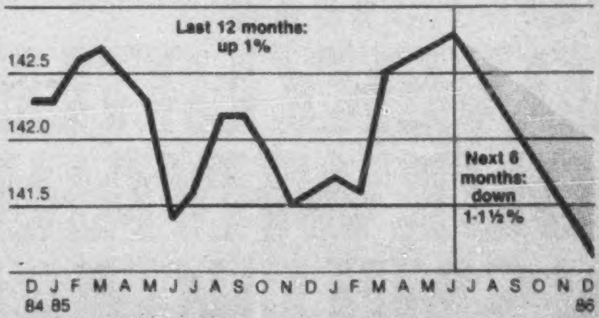
CURRENT SITUATION: Competitive pressures continue to put a lid on price hikes—overall industrial averages are up only 1% *vis a vis* a year ago. The major factor behind all the restraint is continuing import penetration. Despite a U.S. quota system, **incoming shipments are still arriving at a record clip.** Combined 1Q 1985 textile and apparel totals ran better than 25% above a year earlier on a square yard equivalent basis. Not surprisingly, domestic textile mill product output has remained flat since last fall.

DEMAND: Things could be looking up a bit. There has been a good amount of firmness in knits, prints, textured wovens, denims, and bed and bath fabrics. **And there are indications of somewhat better days ahead** as 1) pipeline inventories remain low, 2) rising personal incomes spur apparel buying, 3) a weaker dollar eventually has a positive impact on imports, and 4) consumers gradually react to the "Buy American" campaign. **Best bet: a 3% gain for 1986.**

SUPPLY: No problems here as overseas producers try to circumvent U.S. quotas to get rid of their capacity excesses. Domestic operating rates are fairly low, too—87% at latest report. And the industry has become a lot more efficient these days—thanks to recent mergers and the closing down of old plants. **Another plus for buyers: industry emphasis on what it calls "Quick Response"—an effort to reduce leadtimes.**

PRICE OUTLOOK: Increases seem remote despite a somewhat better second half demand outlook noted above. Reason: basic raw cotton tags could be off 10-15¢/lb by August when a new government pricing system drops domestic cotton fiber quotes to near the world level. This decline is almost sure to put downward pressure on synthetic fibers. **Best bet: Look for a modest drop of 1-1.5% by late summer or early fall.**

Textile mill product prices
(Index: December 1975 = 100)



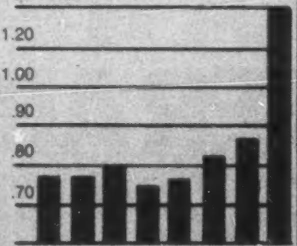
Aluminum

Some of the upward momentum of earlier this year has been lost. Signs of the time: 1) Merchant ingot has dropped a few cents over the past month, and 2) Common alloy sheet tags have been cut 5%. Behind the easiness: a lag in demand following earlier stockpiling against a possible strike. Nevertheless, the industry remains optimistic for the year as a whole— predicting a new all-time shipment high of almost 16 million lb. Another bullish sign: Imports could also begin to taper off as the weaker dollar makes incoming shipments a lot less attractive.

Cadmium

The plating metal continues to buck the general easiness of most other minerals. Recent merchant prices (as high as $1.40/lb) represent a major advance over the 75¢/lb low of late last year. Reason: somewhat tighter overall supplies and reduced inventories (producer and consumer stocks were down to 800 metric tons at the beginning of the year, less than half the levels of just three years earlier). Demand hasn't been all that bad either with 3,600 metric tons expected to clear the market this year, up about 3% from 1985 levels.

Cadmium
(Dealer price $ lb.)



Computer disks

Small (3½ in.) floppy disk quotes have dropped down to $1.40—about half the prevailing levels of two years ago. By next year prices could approach the $1 level—and 60¢ is a possibility by 1989-90. This, in turn, could spur a big increase in demand, especially now that IBM's PC Convertible uses these new small floppies. In any event, one research firm (Dataquest) sees sales topping the conventional 5¼ in. disks by 1990—when shipments of these smaller types are expected to top $300 million (vs. only about $50 million for 1986).

Lead

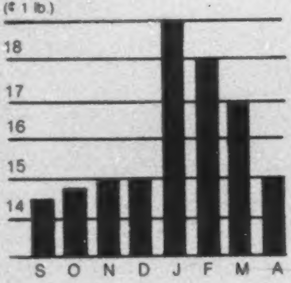
Prices have firmed up a bit to 19-20¢/lb up 1¢/lb from early spring. But a major rally is an unrealistic expectation as supplies are actually up and near-term demand can hardly be called rosy. Current forecasts, for example, suggest a rather flat U.S, consumption pattern—with use unlikely to top last year's estimated 1.24 million tons. But there are some longer run pluses, namely increased usage in asphalt and a possible step-up in Soviet buying to reinforce its nuclear plants against radiation.

PW PREDICTS

Ethylene

Price erosion is still the order of the day. Recent contracts for the key petrochemical are around 15¢/lb or slightly lower—far under the 19¢/lb January high. One key reason: the sharp decline in ethane feedstock costs which, at latest report, were near 15¢/gal, some 10¢/gal under the previous quarter's quote.Supplies do remain fairly snug, but this, too, could change as 865 million lb a year of previously shut down capacity is restarted.

Ethylene
(¢ 1 lb.)



Zinc

The plating and die casting metal is becoming a bit more buoyant these days. Domestic producer prices, for example, have moved up 2¢/lb in recent weeks—with similar increases reported in the European market. One big factor: increased use of galvanized steel to prevent rust in new model cars. But don't expect any major advance. Capacity is more than adequate, and new production will be coming on-stream next year. Then, too, automakers are pressuring producers to sell on a cost-plus basis, removing any possibility of any big supply-demand inspired price surge.

Semiconductors

The industry finally seems to be coming out of its year-long slump. Book-to-bill ratios (orders relative to sales) for Free World producers have jumped to 1.15—far above the 0.75 level of most of 1985. Prices, too, have recovered—with averages up 3-4% over late 1985 levels. And the general uptrend is expected to continue. Dollar sales gains for 1986 should range anywhere from 3.5% (the In-Stat estimate) to the 13.6% estimate of Henderson Ventures. Whatever the final gain, it marks a major change from 1985 when totals fell by more than 20%.

Copper

The red metal still seems incapable of sustaining any significant rally. Not even the threat of a summer mine strike here in the U.S. seems to be making much difference— there is apparently plenty of good quality metal available. Some modest price increases—maybe enough to propel the metal into the low 70s range—are possible later on this year. But that should about do it as U.S. demand does little more than equal last year's level and Free World consumption moves up only about 1% to 7.35 million metric tons.

Steel

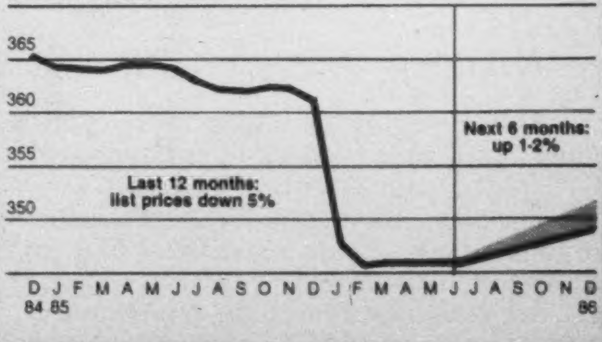
CURRENT SITUATION: Year-to-date demand hasn't been that bad. Shipments in the first half will be up a million tons or so. Flat-rolled prices, reflecting January boosts, are also moderately higher than a year ago. A second round of boosts ($12-20/ton) in May have failed to hold, but prices are closer to lists which were dropped to more realistic levels at the beginning of the year. **Right now, most flat rolled steel sold on a spot basis is moving for only $10/ton under published lists.**

DEMAND: Some near-term weakness seems to be developing because part of the early 1986 advance may reflect hedge buying against possible strikes this summer. **And, some of steel's top markets are sluggish**—auto demand could be off by 5-10% this year and oil country goods are not doing any better. Capital spending surveys do suggest that machinery could be up fractionally, and construction may also post some modest gains, **but the consensus is that shipments will stay at an unimpressive 72.7 million tons.**

SUPPLY: Despite fairly brisk demand, operating rates are still low. 128 million tons of melting capacity will still remain after Wheeling-Pittsburgh, Inland, and some small steelmakers shut down unused plants. Strikes look highly unlikely, and overseas producers are ready and willing to make up strike shortfalls that might occur.

PRICE OUTLOOK: Near-term advances over the 3-4% increases posted in January are unlikely. Price inhibitors include 1) expected leveling off in steel wage boosts (one econometric firm actually sees a wage decline for 1987), and 2) still-strong bargaining positions of big consumers who have locked in lower-than-market prices. **Look for small 1-2% increases over the next six months.**

Steel mill product prices
(Index: 1967 = 100)



Import prices

Recent sharp declines in import prices are misleading. While overall averages fell 6.1% over the latest 3-month period, it was all due to tumbling oil quotes. Without considering oil, the figure actually shows a 3.4% increase over levels of three months ago.

The rise in non-oil sector prices is no surprise. It's now an ongoing trend—with these prices also up 2.3% over the previous quarter. It reflects the hefty 30% decline in the value of the U.S. dollar over the past year or so relative to other major currencies.

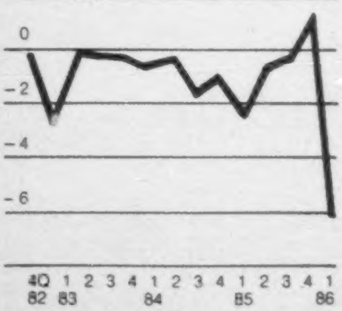
The overall advance over a year ago is 6.6%. And some sectors such as machinery and transport equipment are up 10% over the past 12 months.

Here's a more detailed rundown on all major categories—comparing latest figures with those of just three months earlier:

- **Fuels:** Averages were down a resounding 30% in the first quarter—with quotes now at their lowest levels since mid-1979. The drop wasn't limited to oil—natural gas fell 4.3% from late 1985 levels.
- **Chemicals:** A small 0.4% rise is noted for the first quarter. But pharmaceutical products surged 6.4% because of exchange rate shifts involving the German mark and the Japanese yen.
- **Machinery and transport equipment:** A new 4.0% first quarter advance follows closely on the heels of a 3.6% 4Q 1985 rise. Metalworking equipment viewed separately was up 7.0%—with sizeable boosts also noted for industrial machinery (6.9%), road vehicles (4.8%), and office machinery (4.8%).
- **Raw materials and components:** 1Q advances were registered in bearings (3.9%), in metal manufactures (2.3%), textiles (2.4%), fasteners (2.4%), and paper and paperboard products (0.4%). But non-ferrous metals slipped 1.2% on a continuing global oversupply.

Import price trends

Overall prices are falling again



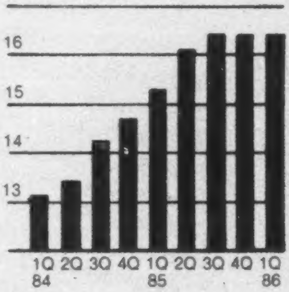
But only because of fuels.
(% change over last 3 months)

Fuels	-30.1
Textile	2.4
Fasteners	2.4
Elec. motors & generators	5.6
Textile mchy.	5.4
Printing mchy.	10.3
Metalworking mchy.	7.0
General industrial mchy.	5.9
Pump & compressors	0.8
Mechanical handl. eqpt.	6.2
Bearings	3.9
Office machines	3.4
Elec. mchy.	1.4
Autos	5.5

Real estate

It's still a buyer's market. Industrial vacancies have risen to 5.3%, up nearly a point over the last year and a half. Most dramatic near-term increases were in St. Louis, Indianapolis, Phoenix, and north and central California. Office space also remains in excess—with 16.5% of downtown square footage seeking occupants. Make that 20% in Denver, Miami, New Orleans, Oklahoma City, Phoenix, San Antonio, San Diego, San Jose, and Tampa. Suburban office vacancies are even higher (22.5%).

Office vacancy rate (%)
(Downtown areas)



Paper

Linerboard prices are averaging nearly $280/ton—up some 17% from January's $240/ton low. And the upcreep should continue—with tags moving back up to about $320/ton by year-end. This should put some upward pressure on corrugated shipping containers. And while they haven't firmed yet, advances of 2-3% are likely by the fourth quarter. And by next year they could move up more significantly, with overall box averages up by as much as 6-7%.

Methanol

Prices continue to tumble on a combination of oversupply and still-retreating feedstock costs. In any event, there's a lot of distressed material seeking a home—enough that prices have dropped about 4¢/gal since January. Gulf Coast bargeloads, for example, now command only 34-35¢/gal—and in some case even less if you are willing to take immediate delivery. Middle East imports should also continue to be directed toward U.S. shores, as alternate deliveries to Europe fetch only 25-27¢/gal.

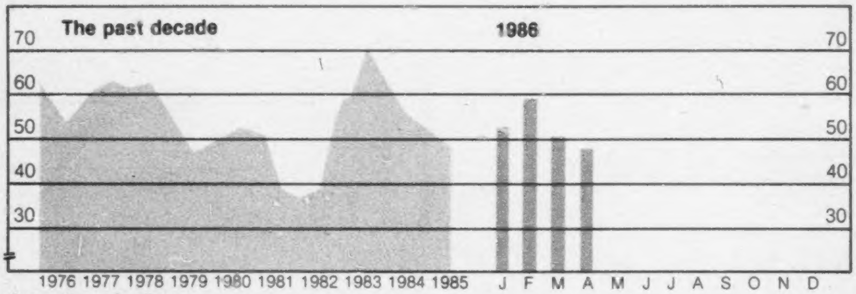
Styrene

A combination of factors—including the oil price tumble, rising imports, and new sellers entering the market—has exerted downward pressure on prices. Quotes are down near 19¢/lb—about 6¢/lb under recent January peaks. And even this doesn't tell the whole story. Some reports indicate, for example, that big volume (100 million lb) buyers are getting material for under 16¢/lb. On the other hand, demand remains quite respectable. The industry expects to produce 7.6 billion lb this year—up slightly from last year's 7.4 billion lb.

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Feel frustrated? Slow growth will do it every time

Current talk in the media and elsewhere about the sagging economy notwithstanding, business is still solidly in the plus column and is likely to remain there for at least another year or two.

Why the confusion? Basically it stems from disappointment, namely that the hoped-for "mini-boom" following the oil price slide has failed to materialize.

Recent results, for example, suggest that the second quarter GNP advance will be pretty much in line with the first quarter's lackluster 3% gain (annual rate).

In a sense, this slow-growth trend may not be all that bad. As one business analyst recently put it: "Slow growth may be frustrating, but it's a pretty sure guarantee against excesses. The economy will finish 1986 in the plus column—The overwhelming odds are that the following year (1987) will be the fifth consecutive year of economic growth."

Most economists, both in and out of government, seem to agree that there's precious little to worry about over the quarters immediately ahead. And they cite some pretty impressive evidence.

For one, interest rates are falling. The prime rate is under 9% for the first time since the late 1970s.

And this is translating into lower mortgage rates which at latest report were down to 9.9% (30-year fixed rates)—more than three percentage points under year-ago levels. This decline, if nothing else, would seem to assure another good housing year.

Lower interest rates also make it easier for consumers to borrow. The drop in car loan rates is a case in point. And if Detroit pursues its 7% and 8% special financing deals, car sales are likely to pick up significantly in the second half of the year.

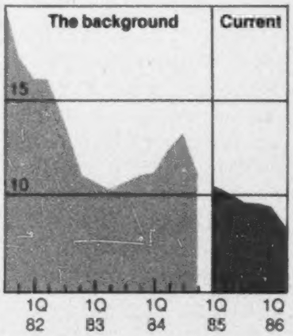
Consumers, themselves, also seem a lot more willing to spend. Thus plans to buy autos, homes, and major appliances climbed to a record high in April (the latest available month).

All this, in turn, should keep the savings rate low. Consumers are currently saving only about 4.5% of their take home pay—far less than the 6-7% of a few years ago. And given rising incomes, this should be enough to assure some sizeable gains in both durable and non-durable categories in the months and quarters immediately ahead.

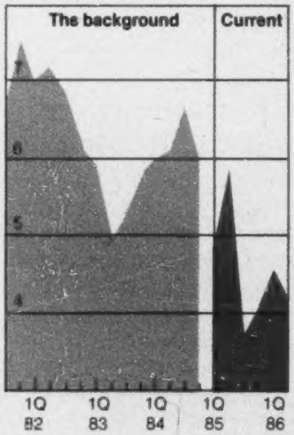
Nor does the above exhaust the list of positive factors propping up the economy. Other major pluses would have to include 1) the stimulating impact of another big federal deficit, 2) the weakening dollar, which by fall or winter should finally begin to stem the import tide

Leading indicators

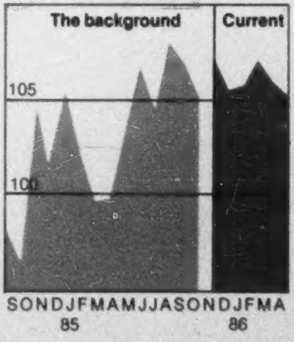
1. Prime rate
(Percent)



2. Savings rate
(% of disposable income)



3. Durable goods orders
(Bil. of $, seas. adj.)



(and hopefully stimulate exports as well), and 3) relatively tight inventories on all levels of trade.

Inventories under control of PMs are especially trim. A new government report, for example, puts the durable purchased material stock-sales ratio at only 0.50.

New orders have tapered off a bit. But much of this can be attributed to the dropoff in the petroleum sector and the uneven pace in military procurement.

Conclusion: Industrial production, which showed some minor declines in recent months, should soon begin to turn up again. ***PW***'s forecast here: a 2% increase in second half manufacturing output—or about 4% annual rate.

Operating rates mired in low 80s

Good news on the availability front. The nation's factory operating rate remains mired in the relatively low 80% range.

That's well above the recession lows of a few years back as charted here. But it's also about five percentage points under the 85% cut-off point that most economists think separates a buyer's from a seller's market.

Moreover, there is little sign of any near-term rise to this cut-off point. In fact, the average has actually been slipping a bit in recent quarters, not because output is down, but rather because new capacity continues to come on stream.

Over the past four quarters, for example, capacity has advanced by some 2.9%. But output over the same period rose only 1.6%, resulting in operating rates slipping about 1%.

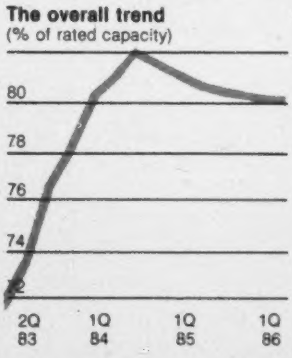
True, the slippage may be over. But given current second half production forecasts, it's highly unlikely that this key measure of purchasing leverage will move up much.

Equally significant, the excess capacity is pretty well spread out over most key industrial sectors. As the chart below suggests, there is only one industry in the 90% plus range, and that's paper where mills are operating at 93.3% of their potential.

But even this is hardly worth becoming concerned with—since paper firms normally prefer to operate at close-to-full capacity. The biggest glut is now in the machinery sector where both nonelectrical and electrical equipment groups are operating at only 70%.

Factory operating rates: still no sweat

The overall trend
(% of rated capacity)

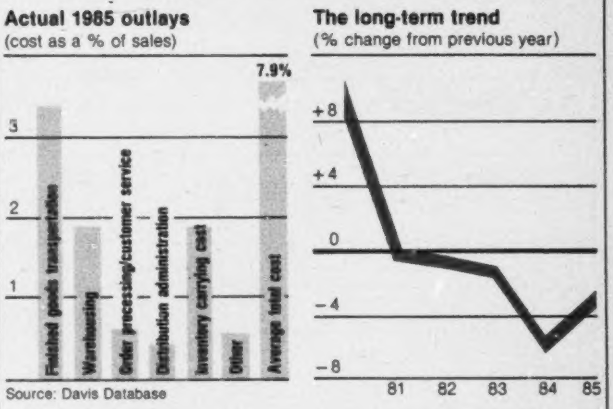


Latest industry readings
(% of rated capacity)

Stone, clay, glass	82.3
Steel	70.8
Nonferrous	83.1
Fabric-metal products	80.6
Nonelectrical machinery	71.8
Electrical machinery	69.5
Automotive	75.7
Aerospace	86.0
Instruments	82.0
Textile products	87.0
Paper & products	93.3
Chemical & products	80.2
Petroleum products	89.1
Rubber & plastic products	86.0

Source: Federal Reserve Board, PW Estimates

How distribution costs shape up



Source: Davis Database

Distribution costs dip

A growing number of firms are making solid progress in cutting physical distribution costs to more reasonable levels.

New national averages (prepared by Davis Database, a New Jersey-based consulting firm) suggest that outlays for such services as transportation, warehousing, and for carrying inventories have been falling relative to sales for five straight years.

The result has been a cost/sales ratio at near 8%—about one percentage point under 1980 levels. That's not an insignificant change. Indeed, for a firm grossing $10 billion a year, the savings are close to $100,000.

But cost declines, particularly in the past year, have been selective rather than across-the-board—centered in just three categories (finished goods transportation, inventory carrying costs, and order processing/customer services).

The implication: There is room for still more improvement, particularly in warehousing and distribution management. Moreover, there have been important changes in distribution over recent years that offer myriad new opportunities. Deregulation of carriers, improved energy efficiency, better inventory planning technologies, and warehouse automation—all these offer substantial potential for further cost cutting.

Another important finding of the new study is that not all firms have shared in these recent savings. While 44% of surveyed companies were able to reduce their cost/sales ratios last year, some 20% reported higher ratios, with the remaining 36% noting little change.

CURRENT PRICES

Prices down, credit sagging oil tags

Chalk up another month of steady-to-lower industrial prices—at least as far as overall averages are concerned.

And once again the lion's share of the credit must go to the sagging oil market as the declines of previous months continue to filter down to refined petroleum products and other energy-related areas.

The energy impact can probably best be appreciated by looking at the "energy" price index (bottom chart). At latest report it was running a hefty 18% under year-ago levels.

But looking ahead, there are signs that these fuel and power costs may be ready to bottom out. Gasoline quotes, over the past few weeks, for example, have halted their free fall. And this should show up in next month's *PW* producer price rundown. Indeed, average tags could actually rise a bit here—reflecting the approach of the summer driving season.

As for most other product lines, the current picture remains basically mixed. This is clearly evident in metals. On the upside are lead, zinc, calcium, vanadium, and mercury. But all this is being offset by failures of recent price hikes to hold in flat rolled steel products and common alloy aluminum—plus there have been some actual declines in cobalt, molybdenum, selenium, bismuth, and manganese.

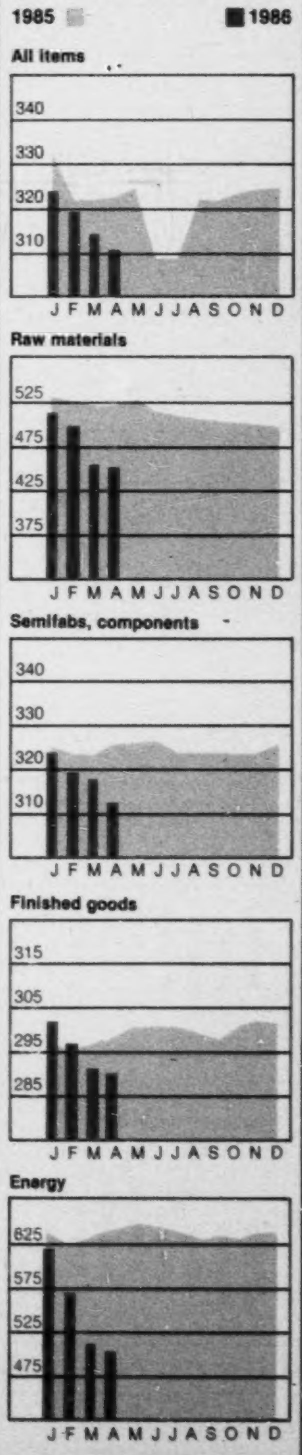
Similar diverging trends are noted in other key sectors, too. Thus price increases in some building materials (notably lumber and plywood) have been effectively balanced out by continued easiness in cement and asphalt roofing.

The situation is similar in chemicals. Prodded by lower feedstock costs, many petrochemicals and plastics have been falling. But some of the inorganics such as chlorine have been firming.

Finally, machinery prices on average have actually been moving up a bit. But the increases are likely to remain modest. A new government survey suggests that overall 1986 increases will only be on the order of 1.5%—thanks to relatively small material and labor cost increases

This month's breakdown

	Latest level (Apr.)	% change from: Month ago	Year ago
Bearings	354.2	0.2	2.0
Bolts, nuts, etc	275.4	−0.9	−0.9
Chemicals, inorganic	295.7	0.2	−1.6
Chemicals, organic	353.0	−2.2	0.1
Concrete products	325.4	−0.1	3.0
Corrugated cartons	263.8	−0.1	−8.0
Cutting tools, small	289.6	0.1	1.6
Electric lamps (bulbs)	351.5	0.6	3.2
Electronic components	200.1	0.4	0.7
Fans and blowers	363.0	0.2	1.5
Foundry and forge products	364.8	−0.1	0.6
Fuel oil (residual)	665.5	−12.0	−40.2
Furniture, commercial	315.4	−0.2	3.6
Gasoline	371.3	−21.5	−28.1
Glass, flat	229.5	−0.1	3.9
Glass containers	388.5	0.3	3.9
Gypsum products	351.1	−3.1	4.4
Hand tools	382.2	0.4	3.0
Hand tools, power driven	235.9	0.6	2.0
Industrial furnaces	394.9	−0.2	2.9
Integrating and measuring instruments	234.8	−0.4	1.2
Internal combustion engines	349.6	0.2	2.9
Lubricating oil	381.4	0.2	3.0
Lumber millwork	313.7	0.6	1.1
Material handling equipment	295.3	0.0	0.4
Metal containers	361.2	0.0	0.9
Metal mill shapes (nonferrous)	307.0	0.1	−1.3
Metal tanks	304.9	−0.3	−0.4
Motors and generators	349.3	−0.1	−0.1
Motor trucks	307.3	0.4	4.2
Office and store equipment	153.9	−0.8	0.3
Paperboard	266.1	1.3	−6.9
Paper boxes and shipping containers	265.7	−0.2	−4.1
Paper office supplies	236.9	−0.1	−1.5
Paint	280.0	0.4	1.8
Plastic resins	300.8	−0.1	−1.8
Precision measuring tools	268.3	1.1	2.6
Pumps and compressors	357.9	0.2	0.5
Refractories	373.2	0.1	1.7
Rubber belts and belting	337.5	−0.6	−4.5
Scales and balances	231.6	0.4	0.7
Steel products	345.4	0.1	−5.1
Switchgear	283.6	0.4	0.7
Textiles, synthetic fibers	151.5	0.7	−3.2
Textiles, gray fabrics	151.0	−0.3	−0.7
Tires and tubes	236.5	−0.3	−1.0
Transformers and power regulators	234.4	0.1	−0.2
Welding equipment	299.2	0.1	2.2
Wire and cable	206.5	0.0	1.8


Industrial prices

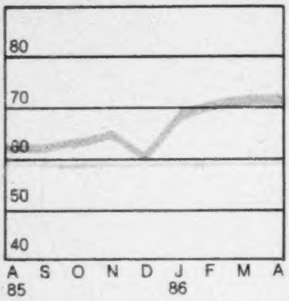
(Index: 1967 = 100)

Source: Bureau of Labor Statistics

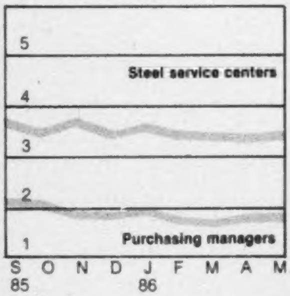
BUSINESS DATATRAK

Steel

Operating rates

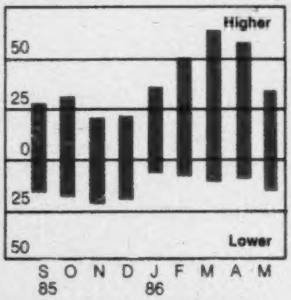


Inventories
(Months supply on hand)

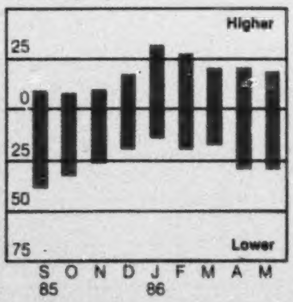


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer purchase



and a quite low 70% operating rate.

This machinery projection is also pretty much confirmed by new Wharton Econometrics forecasts which suggest only a 1.2% increase for capital goods this year. But there will be some acceleration as the year wears on with second increases viewed separately in the 2.5% range.

Add the above to the end of energy price declines—and all signs now seem to be pointing to resumption of increases in industrial price averages, albeit at a very modest rate. *PW* projections here: increases in the 2-3% range through the rest of the year.

STEEL SCENE

Steel aplenty, demand level

There's good news on the price front—the nation's steel distributors have reduced their estimates of near-term boosts.

A new Steel Service Center Institute (SSCI) survey shows that only 65% of the respondents anticipate higher metal replacement costs by fall, compared to 88% last month. And some 10% now feel that tags may actually be lower six months from now—double the 5% who saw the likelihood of declines last month.

Why the big change in thinking? One reason could be that a second boost in 1986 on flat rolled products has failed to hold. Another factor could be that order estimates are being toned down a bit in line with the nation's rather lackluster factory performance.

On this latter point: Only 35% of today's distributors anticipate an increase in new billings over the next few months. That's not much more than half the 59% who were predicting gains in orders a month earlier.

One recent SSCI estimate for overall 1986 confirms this more cautious thinking. It puts estimated distributor shipments this year at 20.6 million tons—a shade under the record 21 million tons that cleared the market in 1985.

Commenting on all this, Andrew Sharkey, SSCI president, notes that "although nationwide daily shipping rates continue strong, many parts of the country are experiencing a decline in general business conditions."

On the other hand, service centers seem determined to hold onto as much of the steel market as possible. To improve their flexibility, they are now leasing rather than buying additional equipment. Most of the capital spending planned for the year will go for upgrading equipment to meet customer needs better.

Also high on the list of distributor priorities are plans to beef up computer information systems. More and more of them are upgrading links so customers can have improved access to their product mix.

But there is just so much that service centers can do to keep business in an uptrend. Reason: Overall steel demand doesn't seem to be going anywhere. The latest NAPM steel buyers survey, for example, finds that more PMs now expect a drop in steel purchases (from both distributors and mills) over the next three months. The actual number predicting a decline (30%) far exceeds the 18% who expect an increase.

Part of the demand lull could be due to tighter inventory controls rather than reduced consumption. Specifically, steel buyer and service center holdings are put at under two months and three-and-a-half months, respectively—both under year-earlier readings.

But this latter appraisal should be taken with a few of grains of salt. Reasons: 1) Steel consumption will be level rather than down this year, and 2) stock/sales ratios for many are now pretty close to rock-bottom levels

One thing that almost everyone seems to agree on is that import quotes remain below comparable domestic levels. Three out

Import prices
(Compared to domestic)

Steel buyers

ABOVE 9%
SAME 30%
SLIGHTLY BELOW 58%
SUBSTANTIALLY BELOW 3%

Service centers (carbon)

ABOVE 0%
SAME 39%
5-10% BELOW 61%
10-20% BELOW 0%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

of five service centers buying carbon steel say overseas material is cheaper.

Buyers, who lump all kinds of imported steel together, tell much the same story—with 61% noting import price breaks.

And this price advantage is expected to continue—buyers say there will be little change in import dependency over the next six months.

There still seem to be very few availability problems. Only a handful, for example, see any snugness developing over the next six months. And this snugness is only in one area—coated sheet.

PROCUREMENT STATUS

Some slowing, but not to worry

There has been some growing evidence of some modest leadtime stretchouts over the past few weeks. Therefore:

- *PW*'s exclusive leadtime index has held in the "51" range for the second straight month—suggesting that slightly more items are extending than are coming in.
- NAPM's speed-of-delivery survey reveals slower shipments by 7% of respondents—more than offsetting the 5% who reported some speedup. For the *PW* index, this marks the second straight month of fractional deterioration.
- A slight uptick is noted in the number of PMs committing 90 days or more in advance for their production materials—16% at latest report vs. 12% a month earlier.

But purchasing executives are unanimous in their appraisal that there is little to worry about. They feel that any recent increases in delivery times have been due to supplier reluctance to carry sufficient inventories rather than to any underlying capacity problem.

Not only is American industry producing at a relatively low 80% rate, but the percent of capacity figure has actually been declining in recent months. Also reassuring: Every single major sector is producing at or under its preferred level.

Two other signs that things are still pretty much under control: 1) the absence of items on the NAPM short-supply list, and 2) the continuing decline in buyer inventories.

On the latter score, some 24% reduced their holdings over the latest reported month—almost twice as many as the 14% who noted some accumulation. That this is happening when strikes are possible in steel and nonferrous metal attests to the fact that no one is really worried.

Where do we go from here? The consensus is that the current slight leadtime stretchout will end by late spring as suppliers fine-tune their production schedules to meet a slow steady growth pattern into early 1987.

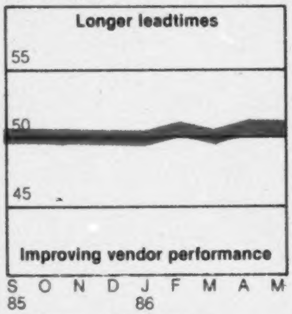
That's not to say there won't be a few problems. Some electronic components are almost sure to get a bit tighter—but this will be the exception rather than the rule.

As one Pennsylvania PM puts it, "the buyers' market is here to stay. And on the outside chance that domestic suppliers can't meet our needs, there are plenty of overseas people who are ready, and willing to fill the breech."

Monthly procurement status report

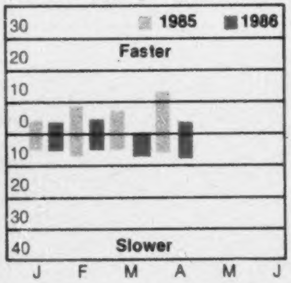
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



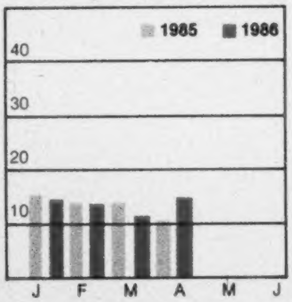
Delivery performance

(Percent reporting deliveries)



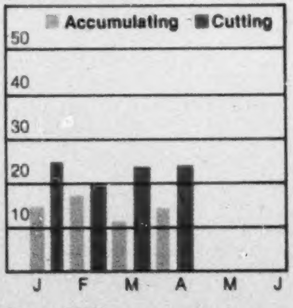
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: A mixed picture in steel—hr sheet is in a bit (to 4-5 weeks) but coated galvanized sheet is out (to 7-8). Brass and copper have stretched to these weekly waits: special sheet and coil (3-7), special rods (6-9), and wire (8). Chlorine is out (½ to 1).

Cleveland: Status quo here with these typical weekly waits: paint (2), plastic resins (2-3), cold finish aluminum (8), alloying materials (on demand), softwood lumber (3), waterproof papers (4-5), plastic shrink film (on demand), corrugated (2-3), and steel canisters (1).

Los Angeles: Modest stretchouts to these weekly leads: brass castings (6-8), corrugated cartons (4-6), domestic fasteners (6-8). No changes in foreign fasteners (12-16), galvanized steel (12-14), aluminum tubing (6-8), grey iron castings (8-10), and linear ICs (30).

Houston: Some slight extensions are reported in shop-fabricated carbon steel pipe (to 2-6 mo.) and structural steel (3-5 mo.). But high

BUSINESS DATATRAK

pressure heat exchangers have inched in (to 4-8 mo.). No changes in other long-lead items such as motor control centers (3-7 mo.), and power transformers (4-7 mo.).

Philadelphia: Standard fasteners have moved out (stock to 6 weeks). Specialty types remain unchanged at 8-10. Some stretching in PC boards is also possible by 4Q—to over 10. Little change elsewhere with these weekly waits: std. bearings (stock to 4), std. pumps and valves (8-10), electric motors (12).

Pittsburgh: Most nonferrous metals are holding steady at 2 weeks, except for large orders of tin (6) and mill quantities of fabricated copper (6). Other prevailing leads: steel trapping (2-3), paint (4-5), paper bags (4-6), drums (1), and plastic packaging (2-3).

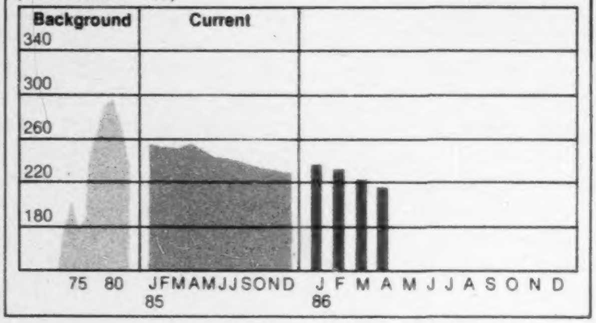
Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	7½	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	2½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	4	3
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	7
Galvanized (Chgo)	7½	6	7
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	9	9	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	13	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	11	11	11
Motors (Phil)	10	10	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	10
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	3
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Napthalene (Chgo)	2	2	2
Paint (LA)	4	4	1½
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	3½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	3½
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	12	12	10
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	12	12	9
Brass Castings (LA)	7	5	5
Brass Rods (Chgo)	7½	6½	5
Brass Sheet (Chgo)	5	4	5
Brass Tube (Chgo)	8	7	9
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	4½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	1
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	5	5
Fasteners, Std. (Phil)	2½	1½	2
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	33
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	2½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

Raw material price barometer

(Index: 1967 = 100)

Latest month	**219.7**
Month before	**223.1**
Year ago	**257.1**



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	25.10
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	29.25
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	25.90	25.15	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.595	.613	.520
Antimony, in alloy, lb.	1.35	1.35	1.35
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.35
Brass, red, 85%, [sheet], lb.	1.32	1.32	1.32
Brass, yellow, [sheet], lb.	1.27	1.27	1.27
Cadmium, ton lots, lb.	1.30	1.15	0.95
Copper, electrolytic, wire bars, refd., lb	.68	.68	.69
Copper sheet, over 24 in., lb.	1.41	1.41	1.41
Lead, common, N.Y., lb.	.190	.190	.200
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	253.00	265.00	293.00
Molybdenum, oxide, dealer, lb.	2.75	2.65	4.12
Nickel, cathode, dealer, lb.	1.90	1.86	2.47
Platinum, dealer, oz.	412.00	402.00	282.00
Silver, N.Y., oz.	5.23	5.17	6.28
Tin, Straights, N.Y., lb.	2.62	2.70	5.48
Zinc, Prime West, East St. Louis, lb.	.33	.33	.45
Zinc, die casting alloy, No. 3, lb.	.415	.415	.515
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.40	16.35	16.25
Shipping sacks, ton	390.00	390.00	440.00
Solid bleached paperboard, ton	550.00	550.00	600.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.237	.228	.352
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.045	1.045	1.040
Cotton middling, 1", N.Y., lb.	.645	.630	.602
Printcloth, 48", 80x80, N.Y., spot. yd.	.68	.65	.63
Army duck, 37", 13 oz., yd.	1.48	1.48	1.70
Blended printcloth, 64", 78x54, yd.	.80	.72	.70
20s combed yarns	2.05	2.05	1.95
Wool tops, N.Y., lb.	2.00	1.80	2.10

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.455
Ammonia, anhydrous, tanks, Gulf Coast, ton	100.00	100.00	N.A.
Benzene, petroleum, tanks, Houston, gal.	.74	.67	1.51
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks; lb.	.91	.91	.86
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.52	.52	.54
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.270	.270	.305
Polyethylene resin, low density liner film grade (market place), lb.	.325	.345	.280
Polypropylene, homopolymer grade (market price), lb.	.345	.370	.330
Polystyrene, general purpose grade (market price) lb.	.32	.33	.35
Polyvinyl chloride, pipe grade (market price) lb.	.285	.305	.310
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.21	.21	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb.	.73	.73	.69
Xylene tanks, gal.	1.36	1.36	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	326.40	307.20	302.25
Lumber 2x2 pine, mbf, cl	323.60	305.25	299.95
Plywood, plyform, ¾", msf, cl	598.70	590.60	566.95
Plywood, ⅝", msf, cl	389.40	381.20	367.85
Cement, bulk, ton, tl	65.69	65.84	64.76
Sand, ton, cl	6.57	6.46	6.24
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	47.45	48.33	47.64
Crushed stone, 1½", ton, cl	7.98	7.92	7.62
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.83	0.83	0.80
Gypsum sheathing, ½"x1"x8", msf, tl	217.87	213.87	207.94
Brick, common, per thousand, tl	186.91	186.71	180.28
Asphalt paving, AC-20	162.69	167.53	175.64
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.07	7.07	7.24
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	8.50	10.50	22.25
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	14.75	16.50	28.50
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.603	.585	.860
Gasoline, 94 oct., reg., Chi., tank car, gal.	.545	.435	.818
Heating oil, No. 2, Chi., bulk, gal.	.453	.490	.775
Heating oil, No. 2, N.Y., bulk, gal.	.483	.450	.800
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.420	.400	.715
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.290	.290	.355
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	71.00	74.00	72.00
Steel, No. 1 hvy., dlvd., Chi., ton	73.00	73.00	67.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.585	.580	.570
Copper, No. 2, East, wholesale, dlvd., lb.	.505	.500	.460
Brass, red, East, wholesale buy, dlvd., lb.	.545	.540	.530
Brass, yellow, East, wholesale buy, dlvd., lb.	.300	.300	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.340	.390	.290
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.370	.415	.320
Zinc, old, East, wholesale buy, dlvd., lb.	.150	.150	.140
Lead, clean solids, East, wholesale buy, dlvd., lb.	.108	.105	.110
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	15.00	12.00	15.00
Paper, old corrug. box, dlr., N.Y., bon	12.00	12.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.100	.110	.100
White wipers, No. 1, dlr. buy., f.o.b. N.Y., lb.	.120	.125	.260

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Survey of the month

PMS pull back reins on prices

The nation's top industrial purchasing managers are reducing their overall procurement cost estimates for 1986.

Results of a new nationwide *Purchasing World* survey suggest only about a 2.5% average increase for the current year. That's more than half a percentage point under increases that were anticipated at the beginning of the year when a similar survey was conducted.

And there could be a lot of buyers who fare even better than average—a substantial number are talking about only 1-2% advances. And 8% of respondents are even hoping to hold the price line at or under last year's levels.

In any event, this year should not be very different from 1985. Answers to another survey question confirm this conclusion. Specifically, the 21% of respondents who expect bigger price hikes this year is pretty much offset by the 17% who expect smaller boosts. Equally significant are the 62% who anticipate very little change.

Reduced energy cost pressures have certainly played an important part in this rosy price picture. But there are other forces operating too. "Don't forget the continuing buyers' market," adds one Midwestern PM, who goes on to cite such price-inhibiting factors as very modest demand gains, ample or more-than-ample capacity in most lines, and a continuing influx of cheap imports.

Some of the more specific findings from the just-completed *PW* survey:

The oil impact: More than two of every five respondents say this is having a substantial effect. These same PMs put the overall acceleration caused by energy at 1-2%.

Sector-by-sector variations: As might be expected, the energy price advance is expected to be quite low—only around 1.5%. Similar small increases are seen for freight and office equipment. On the other hand, raw materials, component parts, and machinery are all expected to advance by 3%.

Areas of extreme weakness: Tags under 1985 levels are deemed possible in such product lines as tubing, selected plastic resins, petroleum products, natural gas, petrochemical feedstocks, computers, and printers.

Bigger-than-average price boosts: Items cited here include steel, aluminum, platinum, selected electronic components, liability insurance, paper products, abrasives, lumber, and some imported machinery lines.

But whatever the individual trends, purchasing executives say that they mean to fight price increases whenever possible. One of their key strategies: shifting an increasing share of their orders to fewer and fewer suppliers—a move which they feel may give them a lot more bargaining leverage.

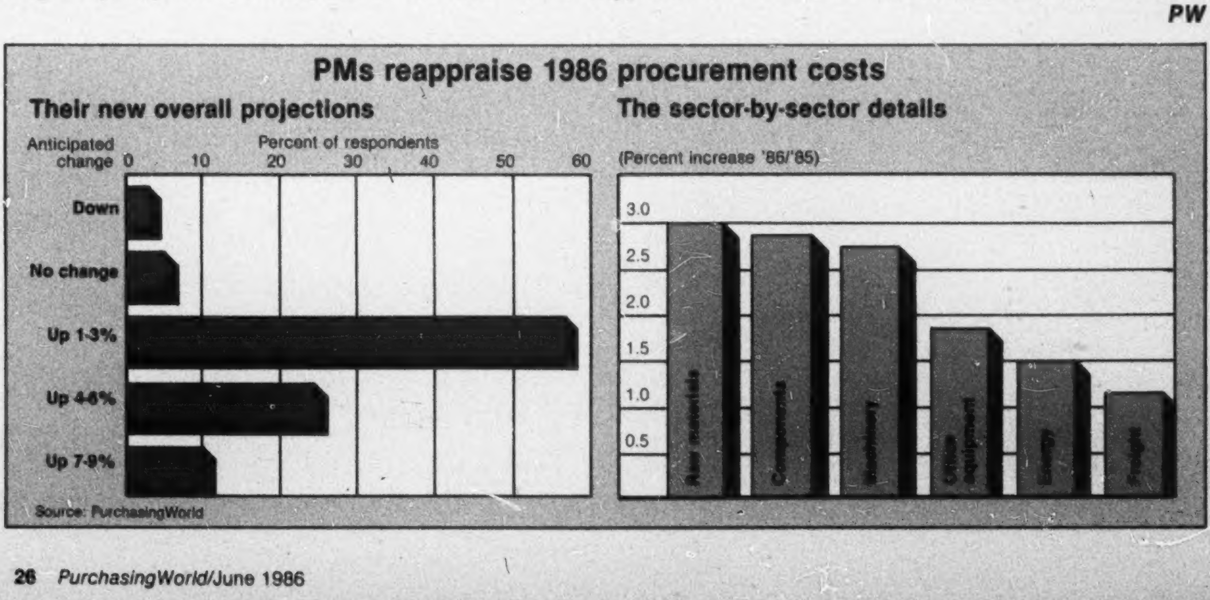
Other hold-the-line approaches include 1) more, longer-term commitments, 2) consolidation of orders from various plants and locations, 3) closer contact with vendors (especially where just-in-time deliveries are crucial), 4) aggressive negotiation—including demand for detailed cost justification, and 5) continued efforts at locating cheaper foreign sources.

On the latter score, one purchasing manager admits this might be a bit more difficult with the dollar down some 30% on a trade-weighted basis. But he adds, "I think there's enough fat in some overseas operations to allow for some additional good buys."

Still another PM says that the currency impact is being overblown for another reason. He notes, for example, that the dollar has not really weakened all that much *vis a vis* some countries such as Canada, Latin America, and even some Far Eastern countries like South Korea.

Perhaps the price outlook can be summed up by one Ohio-based purchasing executive who observes "there are few areas where we have to accept price increases these days. And while we are officially projecting a 2-3% increase in overall costs, I'm still hopeful that with a little savvy and judicious negotiation, we can hold the advance to 1-1.5%."

PW



PMs reappraise 1986 procurement costs

Their new overall projections

The sector-by-sector details

Source: PurchasingWorld

New applications! Plastic is the "now" material of choice

Cycolac brand ABS thermoplastic pellets from Borg-Warner Chemicals Inc. have been the material of choice for more than 25 years for housings and enclosures for consumer durable goods. Borg-Warner has developed more than 80 grades of the material including high impact, flame retardant, transparent, chrome plateable, high flow, foam, profile, and extrusion. For more information contact Borg-Warner Chemicals Inc., International Center, Parkersburg, WV 26102. Telephone (304) 424-5411.

Photo courtesy of Borg-Warner

Robert S. Reichard, executive editor

Plastics, Benjy, plastics! That line from the movie "The Graduate" has never been more appropriate than right now. Plastics are back in vogue as an alternate material of choice—especially with the recent plunge in the cost of petrochemical feedstocks.

Despite solid demand gains, however, buyers are benefitting from ample (and even more than ample) capacity and plenty of new formulations to choose from for their own cost-cutting efforts. And these buyers couldn't be happier—suppliers have failed to make 1Q price increases stick.

Innovation and growth, and, above all, price stability have thrust buyers into the driver's seats of automobiles which are increasingly being made out of plastic.

Equally significant is that there have actually been some decreases in recent months. High-density polyethylene (HDPE), polystyrene (PS), and acrylonitrile-butadiene-styrene (ABS) are all priced below average 1985 levels.

Still another sign of a buyers' market: Transaction quotes on all key commodity plastics are far under official book levels. These official lists are little more than starting points for negotiation.

There will be continuing attempts to shore up transaction prices in the months ahead. But given today's supply-demand conditions and sharp cost declines in key inputs such as ethylene, propylene, and benzene, these price boosting attempts probably won't be any more successful than those of the past few months.

What does this all add up to for 1986? While each resin will behave somewhat differently, the overall 1986 picture should look like this:

Demand

U.S. suppliers will probably be able to boost sales volume by another 4% or so—after last year's 5% advance—bringing total volume to a record near 49 billion lb.

The deceleration stems from the lower anticipated demand from construction and autos over the current year. This has to make a difference since these two industries together account for some 30% of total plastic resin consumption (25% in construction and 5% in transportation).

Some plastics will, of course, post more impressive gains this year. Engineering resins, for example, could rise by as much as 5% this year—and by at least that much in the next few years as well, and prospects appear to be bright for specialty applications such as oil cans, grocery sacks, fuel tanks, barrier packaging, and aseptic packaging.

Prices

There is no real price strength anywhere. Overall price averages are expected to drop about 1-2% this year. This weakness isn't new. Plastics in general have been rising less than 1% annually over the past five years—far less than the overall U.S. inflation rate.

The big difference between transaction and list prices also suggests that buyers are still calling most of the signals.

Some of the current large gaps prevailing:

- *Liner/film grade LDPE* now goes for 32-33¢/lb vs. a 44-45¢/lb list;
- *general purpose/crystal polystyrene* goes for 31-33¢/lb compared to a 48¢/lb list;
- *homopolymer polypropylene* (PP) goes for 33-36¢/lb vs. a 45-47¢/lb list;
- *injection molding HDPE* is now commanding 26-29¢/lb vs. a list of 45-52.5¢/lb;
- *pipe grade PVC* is 28-29¢/lb vs. a list of 44¢/lb.
- and *pipe grade ABS* 58-66¢/lb vs. 72¢/lb list.

If nothing else, all this makes plastics increasingly attractive *vis-a-vis* metals, paper, glass, and other substitution materials—many of which have been showing signs of edging higher in recent months.

Availability

Operating rates tell the story here. In the thermoplastic commodity resin sector, for example, the domestic industry is currently operating at just 85% of its potential. Moreover, 1-2% of additional capacity is expected to come on stream this year and in 1987. The result will be that operating rates won't rise much—not nearly enough to bring about significant market tightening.

And there are plenty of imports to supplement the supply. Last year, incoming plastic resin shipments rose 16%—on top of even bigger 75% and 42% increases in 1983 and 1984. Declining exports, which now account for only 11% of total production (vs. 14% as recently as 1982), also add to overall supply availability.

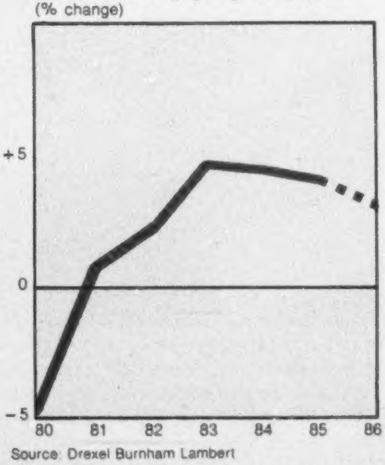
For the longer run, producers in the Middle East, Canada, Mexico, and other oil-rich countries have a favorable cost position in feedstocks. These foreign sources are aggressively entering the commodity plastics field and are building up their capacity to produce high-volume plastics materials. If nothing else, this indicates tougher competition for U.S. plastics exports—even at today's lower dollar exchange rate.

But, as suggested earlier, each resin will be taking a somewhat different path this year and next. Here is a more detailed rundown on what seems to lie ahead for each of the key resin commodities and for rapidly growing engineering and reinforced plastics sectors:

- **Low-density polyethylene:** About a 3-4% increase in demand is anticipated this year—just a bit under the 4.5% advance racked up last year. Actually, this is one of the slowest growing of the major commodity resins—with boosts not topping the 5% mark since 1979. Capacity (which includes LLDPE/HDPE potential) seems more than adequate. Last year's 86% rate will advance to about 88% in 1986.

Film, mostly for packaging, remains the major market, with 56% of the total supply going for this purpose. Exports (12% of total demand) are also an important factor. New developments include the expected introduction of ultra-low density formulations—types said to exhibit excellent flexibility, sealability, and cold-temperature impact.

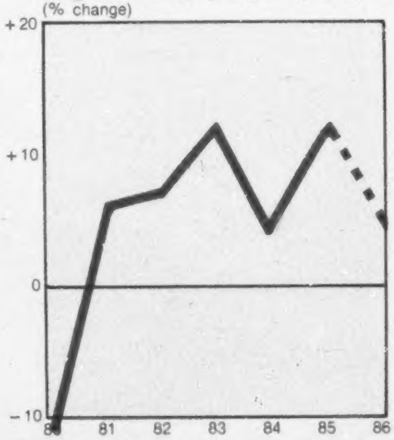
Low-density polyethylene



Source: Drexel Burnham Lambert

- **High-density polyethylene:** This is one of the fastest growing commodity resins—with about a 5% advance seen for this year—on top of 1985's better than 11.5% increase. Suppliers are quite snug here too—with near full-capacity operating rates expected for 1986. But additional supplies are available from swing LLDPE/HDPE plants—and this may be why prices remain shaky. Additional Canadian and Saudi Arabian capacity also would seem to assure a problem-free situation.

High-density polyethylene

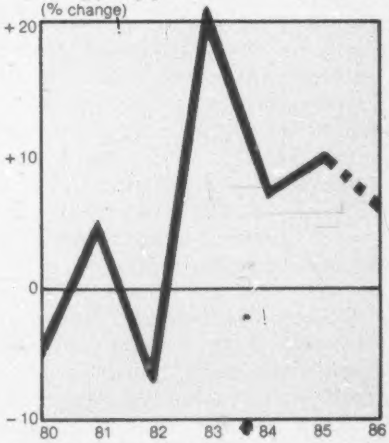


Source: Drexel Burnham Lambert

Injection molding applications sported the biggest gains last year—advancing more than 20%. On a product basis, demand continues strongest in such areas as oil cans and plastic grocery sacks. Potential also exists in fuel tanks and large 55-gallon drums. And, as is the case with LDPE, more grades are expected to hit the market, aimed at such diverse end-use applications as oil cans, milk bottles, juice containers, boil-in-bags, shipping drums, and snack packaging.

- **Polypropylene:** The failure of a recent price increase to hold and recent cost declines in propylene indicate continued easy prices through summer. Quotes will hover in the mid-30s. Demand, on the other hand, looks bullish. About 5.6 million lb are expected to clear the market this year—up 7% from 1985 levels. Operating rates, at 94%, are well above the all-plastics average. But a substantial 5-6% capacity expansion is expected this year.

Polypropylene

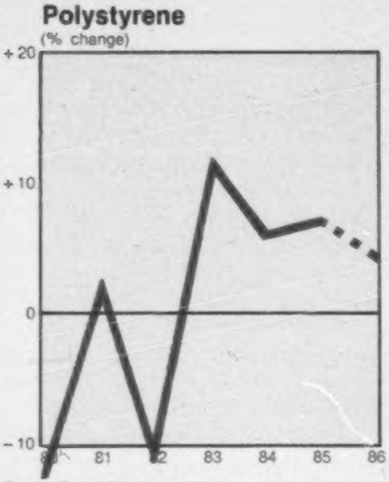


Source: Drexel Burnham Lambert

The longer-term demand outlook is fairly bouyant—as this plastic makes new inroads in such areas as blown bottles that replace glass, and in extruded barrier containers which are replacing tin cans. Technological developments have yielded new formulations that are cleaner, tougher, more consistent, more thermally stable, and less costly.

- **Polystyrene:** Even with the market at its seasonal peak, there is still more-than-ample capacity to meet demand which is expected to rise by a moderate 4-5% (into the 4.3 million lb range) in 1986. In any case, overall 1986 operating rates are not expected to climb much above the low 70s level over the current year. It is not surprising that the 4¢/lb price increase of earlier this year has not stuck. And many buyers now say quotes are lower than they were late last year.

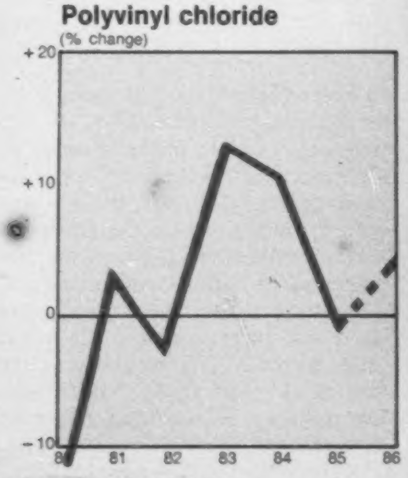
These same buyers are also looking for many upgraded resins that



Source: Drexel Burnham Lambert

promise vastly improved processability, increased strength, and higher gloss levels. They should also allow this workhorse resin to compete better in higher-performance markets. More specialty and clean crystal grades (which reduce residual monomer by more than 50%) are also being developed.

▪ **Polyvinyl chloride:** Some improvement in demand over last year's basically flat pattern is almost certain. Recent buying, boosted by a strong seasonal surge in construction (the resin's biggest market) is currently running well above year-ago levels. Nevertheless, prices have also slipped here over the past month—with pipe grade material fetching only 28-29¢/lb, not that much above the mid-20 low of late last year.

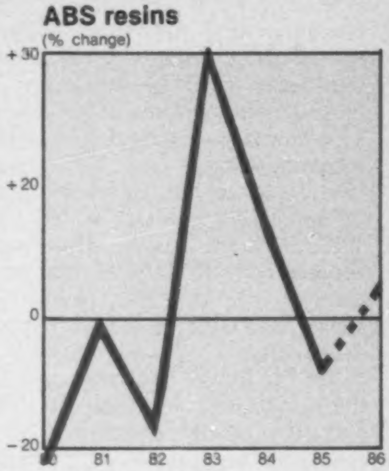


Source: Drexel Burnham Lambert

As for the rest of the year, demand gains could slow down to the point where the annual advance is likely to average out at about 3-4%. Current capacity remains adequate, although a modest advance into the low 80s range is likely this year on a combination of demand gains and an expected 2% drop in production potential.

On the production front, producers are expected to come out with new blends, alloys, and specialized compounds—most of them designed to allow the resin to compete in high performance applications. Some of these include new bottle compounds, and glass-filled PVC compounds. Also look for the introduction of new utility-grade compounds priced below conventional pellets.

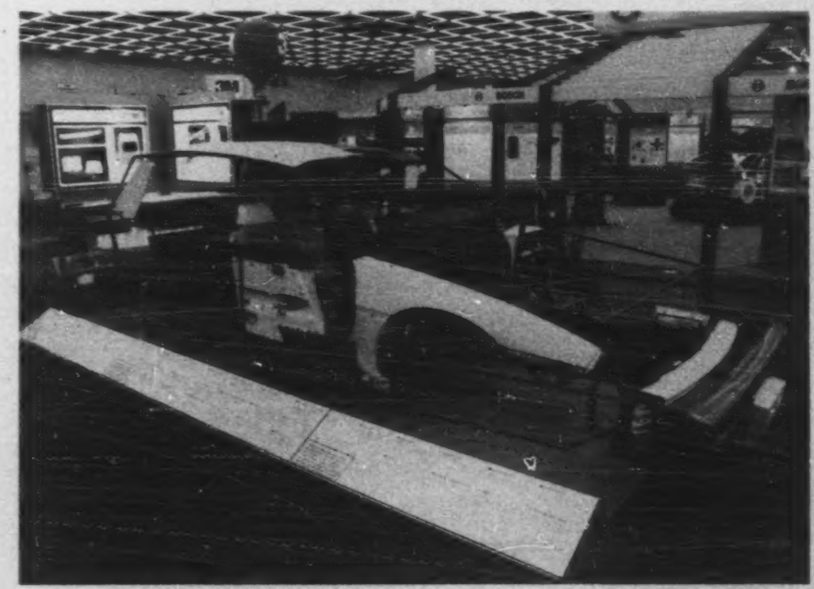
▪ **ABS resins:** This plastic is coming off a disappointing 1985 when overall shipments dropped by 8%, Behind this decline in domestic buying: an import wave of ABS containing appliances, autos, and electronic machines. This year, however, the industry should return to the plus column. The gain, held back by imports, should only be about 4%.



Source: Drexel Burnham Lambert

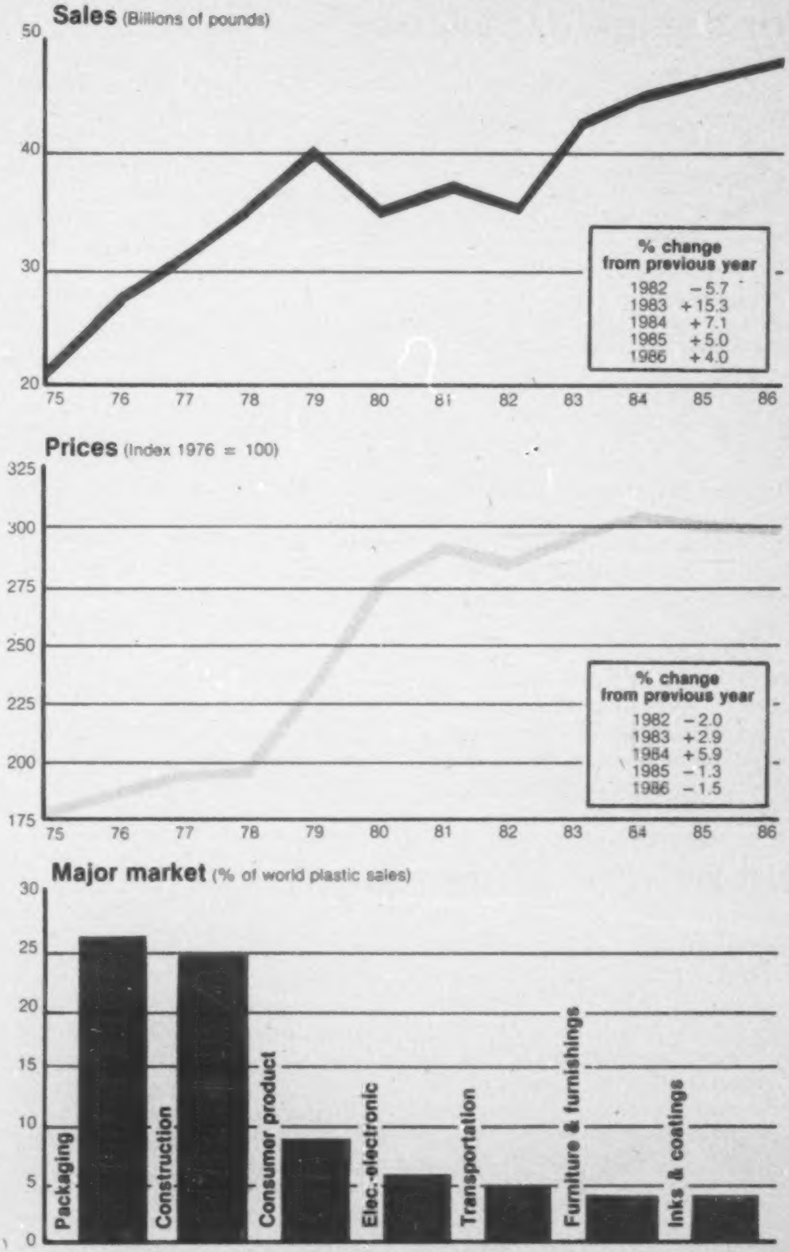
Prices here have been weakening—with 2-3¢/lb discounts recently initiated on several grades. This stems not only from lackluster demand patterns, but also from a huge supply glut which is likely to get even bigger in the next few quarters. Points to keep in mind here: A huge 13% increase in production potential is scheduled to come on stream this year—this should drop the overall industry operating rate into the 65-68% range. And still more capacit another 8% or so, is scheduled for 1987.

These capacity expansions are attempts to meet lower-cost Far-East competition by using bigger and more efficient plants. These moves



A composite from ARCO Chemical Company demonstrates the wide use of chemicals and plastics on the modern automobile. Featured at the recent SAE Exposition, the car highlighted more than 30 current production parts and conceptuul components representing the company's line of engineering resins, foamable materials, oxygenated fuels, specialty chemicals, and advanced materials.

Plastic resins: A market overview



Source: Society for the Plastics Industry, Bureau of Labor Statistics, PW estimate

will also bring in new types of resins—with special emphasis on automotive applications requiring low gloss and high heat resistance.

■ **Engineering resins:** The demand outlook remains rosy. All in all, about a 5% increase in usage is expected this year—with PET/PBT resins (up 8% in 1985) again expected to spearhead the advance. That should be enough to push totals for engineering resins into the 1.2 billion lb range. And acceleration after that (8% a year on average) could mean that as much as 1.8 billion lb could be clearing the market by 1991.

Much of the optimism is based on hopes of more use in autos. A DuPont spokesperson, for example, talks of increased use in body parts, under-the-hood applications, and bumpers. A spokesperson from Celanese adds that transportation uses overall will increase from 30% of the market to 33% in the six-year period ending 1991 (vs. only 25% currently).

Product innovation is, of course, the major factor in all those growth forecasts. Over the past two years, for example, some 200 new resins have been introduced. And a lot more are anticipated—all aimed at penetrating traditional metal markets by offering products with high degrees of structural strength or rigidity, improved stress qualities, and better resistance to hostile environments.

■ **Reinforced plastics:** Growth has slowed down a bit here following the big 12% jump recorded in 1984. According to the Reinforced Plastics/Composite Institute, last year's increase was only slightly in excess of 3%. A similar modest gain in 1986 should bring totals up to near the 2.3 billion lb mark.

Transportation (579 million lb), construction (454 million lb), and marine applications (347 million lb) are again expected to dominate demand this year. The fastest-growing area will be aircraft, where a projected 15% gain will bring usage here up to 37 million lb. Faster-than-average growth (4.2%) is also seen for electrical and electronic markets, where totals are expected to approach 200 million lb this year.

In the longer run, most experts look for accelerated growth—well above the GNP rate. Business Communications, a research outfit, says that technological breakthroughs will have a major impact on the fast-growing aerospace market. Other high growth sectors singled out by the firm's analysts include appliances, business machines, and various consumer products. On the latter score, they estimate that by 1995, one-third of all GM passenger cars will be equipped with plastic exterior panels. ***PW***

NOTE

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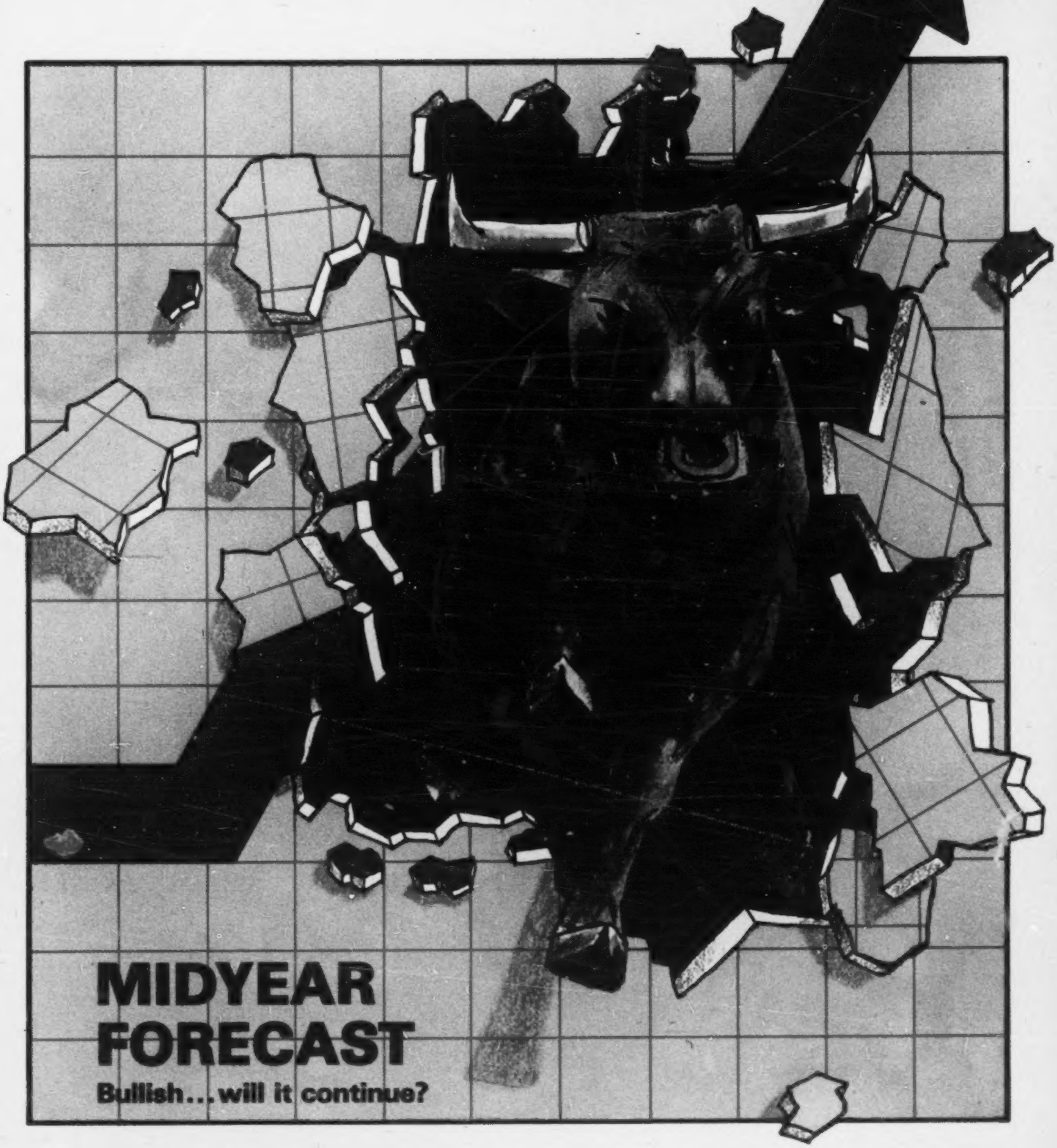

MIDYEAR FORECAST

Bullish... will it continue?

You can do your own forecasting

Vendor rating boosts on-time delivery

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July 1986 Vol. 30 No. 7

Midyear economic report

40 Nobody has tamed this bull economy yet
How bullish you can afford to be in the next six months may depend upon lawmakers' moves on taxes and spending. These will directly affect demand, prices, and interest rates. *PW*'s veteran economist, Dr. Louis J. Paradiso, offers advice for PMs: Watch congress and your inventories closely.

44 Thumbs up for buyers
The nation's top executives say that demand will rise 5% for the year—up dramatically from the 3.4% that they predicted just six months ago. But all other things should assure another year of more-than-ample supplies and a continued buyer's market.

46 Prices will send mixed signals in '87
Don't put a lot of faith in broad-gauge price yardsticks. While overall industrial producer price averages could show a small decline, many items will post modest increases.

48 Revise forecasts upward, say modelers
The big econometric modelers—Wharton, Chase, Merrill Lynch, and DRI—are in general agreement that GNP will be up. Inflation, interest, and unemployment rates will be slightly lower.

51 PMs turn tough on negotiations, on prices
A new *PW* survey of industrial buyers confirms what economists and the models say: moderate growth and subdued prices.

62

76

Features

56 You can do your own forecasting
Noted forecasting authority, George C. Hibben gives solid advice on how to develop your own forecasting and research program.

62 Vendor rating boosts on-time delivery
A formal vendor rating and communications program helped Standard Motor Products reduce late deliveries and partial shipments—and trim inventories and leadtimes.

72 Q&A on minority business enterprise procurement
Here are answers to the most commonly asked questions about doing business with minority vendors from Human Resources Development Corp., a consulting firm that has helped major companies set up MBE programs.

Cover by Donna D'Amico

Departments

4 PW Pointers
6 Editorial
10 PW Predicts
17 Datatrak
30 Law
32 Negotiations
36 PW Transportation Report
65 PW Office '86
70 Pinkerton on PCs
76 Market Checklist: Valves
115 EDI Update
125 Products
134 Talent Pool
135 Sample Pak
136 Crystal Ball Contest
144 Ad Index
145 Classified

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PW PREDICTS

Prices: more restraint than expected

The near-term industrial price outlook couldn't be more optimistic. And a number of factors indicate continued restraint:

- **The petroleum market remains shaky.** Crude oil tags are again on the offensive after a spring rally.
- **The declining dollar is having a modest impact.** Rather than raise prices and lose market share, many overseas producers are apparently willing to absorb much of the differential in the form of lower profit margins.

- **Most of today's markets are still amply supplied.** Latest figures indicate that producers are operating at only 86% of their production potential—with little change anticipated for 1987.
- **Labor unions are adopting a defensive posture.** This position has virtually ruled out any major upward push on wage costs.

The labor situation is perhaps best summarized in Dr. Louis Paradiso's mid-year economic outlook. Paradiso sees unit labor cost increases—a key determinant of industrial prices—remaining virtually unchanged over the remainder of the year and rising by less than 1% in early 1987. You have to go back more than 20 years to find this kind of non-inflationary labor cost trend. And it's something which can't be underestimated, since labor accounts for roughly two-thirds of every sales dollar.

It's no wonder that Paradiso sees Uncle Sam's finished producer goods price index racking up its first negative reading since 1963. *PW*'s survey of the big four leading econometric models (Chase Econometrics, DRI, Wharton, and Merrill-Lynch) reveals that they, too, see finished product declines—ranging anywhere from -0.2% to -1.6% for all of 1986.

Even suppliers (who tend to see things through rose-colored glasses) have tamed their price expectations. Right now they're calling for only a 0.7% increase in the goods they sell. It's a far cry from the 5%+ increases of just a few year ago.

The same price index projected by the four econometric models has decelerated even more—from +2.1% at the beginning of 1986 to -0.9% currently. Supplier forecasts show much the same pattern.

Curiously enough, *PW*'s own readers come up with the biggest estimated increases for the current year—3.1% based on a new survey. But here, too, there has been a slight deceleration.

The improving price outlook is not limited to the U.S. The European Economic Community, in a newly revised forecast, sees its member nations' price level (GNP deflator basis) at only 3.5% this year.

While no one expects finished producer prices to remain negative, the consensus is that increases will be modest.

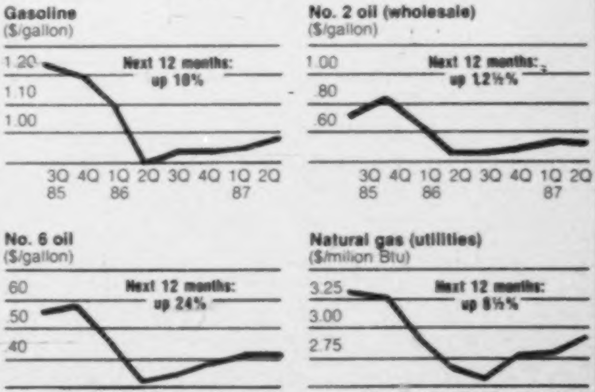
Energy prices

There's good news on the energy price front. Although most types of fuel and power have bottomed out, any increases over the next four quarters will be small.

These projections, prepared by the Department of Energy, assume only a small increase in crude oil prices—perhaps to near $18/bbl by early next year. Here are DOE's more specific forecasts into mid-1987:

- **Gasoline:** A slow price incline will bring average pump prices up to near $1/gallon by next spring—about 9¢/gallon above recent levels.
- **Heating oil:** Prices are expected to hit a low point in the third quarter, the period of lowest demand for this fuel. Assuming normal winter weather and normal inventories, prices should rebound this winter, but only to 56¢/gallon at wholesale—33% under 4Q 1985 highs.
- **Residual fuel:** Prices, which sunk in the second quarter of 1986 to 33¢/gallon, will slowly recover. But even the 41¢/gallon quote projected for early next year should leave these tags 30% under late 1985 levels.
- **Natural gas:** Residential sector prices will decrease 4% this year, while prices to electric utilities may fall by 20%.
- **Electricity:** Continued lower capital costs and an expected decline in the costs of all fossil fuels to electric utilities are expected to keep rates nearly flat, offsetting cost increases resulting from new capacity. This trend is also expected to continue through the first half of 1987.

Energy tabs: four views



Source: Energy Dept.

PW PREDICTS

Chemicals

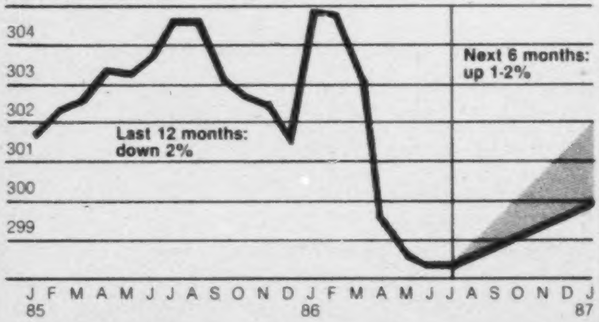
CURRENT SITUATION: Price declines—sparked by the recent oil price slide—have knocked 2-3% off industry averages in the past few months. The drop has been even more precipitous in petrochemicals—overall organics are down 6-7% since January. Specific product declines have been even more spectacular. Recent lows in ethylene and benzene are 20% and 30%, respectively, under pre-oil-drop levels. **Chemical output is running about 3-4% above year-earlier levels.**

DEMAND: 1986 seems to be shaping up well and 1987 looks almost as good. Industry executives, responding to a recent survey, peg the advance at close to 6%. But given normal supplier over-optimism, this may be high. Gains do seem likely to top the nation's expected 2.5-3% GNP advance. **Wharton Econometrics figures on about a 5% production gain for 1986.**

SUPPLY: Currently low operating rates tell the story. At the beginning of the year, average utilization was only about 80%. Even with an expected 5% increase in 1986 input, no big increases are expected. Reason: U.S. firms expect to up their potential by about 3% this year which would limit any overall increase in operating rates to around 2%. **And the glut is likely to remain next year when another 3.5% increase in production potential is projected.** There are plenty of imports to add to the overall supply.

PRICE OUTLOOK: Much depends on what happens to oil. If you accept projections for only steady-to-slightly-higher crude oil—and **overall chemical price averages will rise only 1-2% through December—leaving quotes under January 1986 levels.** There are exceptions. Look for fair-sized boosts in organics such as chloralkalis. But even here tags will remain far under official lists. **Any increases in 1987 will also be quite modest.**

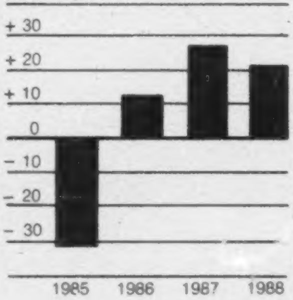
Chemicals & allied products
(Index: 1967 = 100)



Semiconductors

Demand seems to be temporarily leveling off after several months when orders were consistently outrunning shipments. Nevertheless, the industry remains optimistic over the longer pull. The Semiconductor Industry Association, for example, sees total solid state sales in the U.S. advancing 11.5% this year (to $9 billion). More important, things are really expected to take off in 1987 and 1988 when gains of 27% and 21%, respectively, are anticipated. Also just as IC sales felt the impact of the recent recession more than discrete devices, so too will IC sales gain more in the current recovery.

U.S. semiconductor demand
(% change in $ sales)



Office automation

The big push to populate desks with PCs is slowing down. The emphasis now seems to be more on getting additional value out of previous purchases—primarily through multi-user systems to which the PCs will attach. That's the conclusion of a new survey on office automation trends by Hammer & Co. The New York-based market research firm adds that there also is more interest in upgrading and enhancements to existing systems. Another key finding: Users prefer to maintain long-term relationships with their preferred vendor for total system support.

Aluminum

Prices are mixed—with recent declines in common alloy sheet and ingot offset by new advances in can body stock and heat-treated sheet and coil. More significant: Scattered work stoppages are being viewed by the market as a non-event—as earlier buyer hedging assures adequate supplies for some time to come. Producers, too, are well stocked and said to have in excess of a 45-day supply of semi-finished products. Also likely to put a lid on near-term price hikes are new Free World consumption estimates that put 1986 chewup at only 12.5-12.6 million metric tons—actually under last year's levels.

Zinc

What a difference a few months make. Specifically, the beginning-of-the-year glut has suddenly turned into a rather snug market. Result: Dealer prices have moved up into the upper 30s—far above the 29¢/lb low prevailing in early January. Demand gains as well as production curtailments are major factors—with some analysts talking in terms of a 5-10% consumption rise because of increased use of corrosion-resistant materials by the auto and construction industries. Nevertheless, look for prices to top out—as the slow summer season approaches and rising prices encourage reactivation of shut-down facilities.

Lead

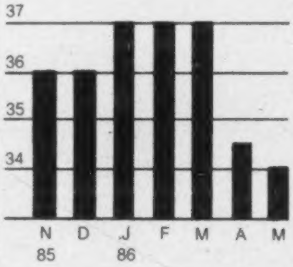
Producers are attempting to shore up prices—following recent spring easiness. Aim is to bring quotes for the key pipe grade up into the 30¢/lb-plus range—with much of the pressure coming from recent tightness in VCM feedstocks. Another factor suggesting bullishness is good demand from the booming construction industry. As such, overall PVC demand should advance 3-4% this year. Coupled with a 2% capacity reduction, this suggests a big five percentage point jump in operating rates.

Polypropylene

Declining propylene feedstock costs are putting downward pressure on the resin. At latest report, the bellwether homopolymer grade was fetching only 33-35¢/lb—off about 1¢/lb from previous levels. But while the cost picture is pointing to lower price levels, the underlying supply-demand price outlook remains quite bullish. Right now, for example, the industry is talking in terms of a strong 7% shipment gain—on top of last year's even larger 9.5% advance. Result: Relatively snug supplies. Indeed, operating rates could be approaching the 94% level this year—even with an expected 5-6% increase in new production potential.

Polypropylene

(Homopolymer market prices ¢/lb.)



Selenium

Prices have dropped by close to 30% since the beginning of the year—bringing this minor metal down to under $5/lb. Nor is any bounceback likely as demand remains pretty much at last year's disappointing levels. One of the problems is substitution—with losses to high-purity silicon already apparent in semiconductor applications in rectifiers. Some photoelectric applications are also under attack—by silicon, cadmium, tellurium, gallium, and organic photoconductors.

Chlor-alkalies

Chlorine is continuing to move up the price ladder—with quotes to the VCM

Copper

CURRENT SITUATION: The red metal continues to mark time. One factor holding tags in check is the absence of severe supply disruptions—despite scattered strikes both here and abroad. There are a few bullish developments. **The heavy inventory overhangs of 1984 and 1985 have all but disappeared** and demand hasn't been all that bad either, with a major assist coming from the booming construction industry.

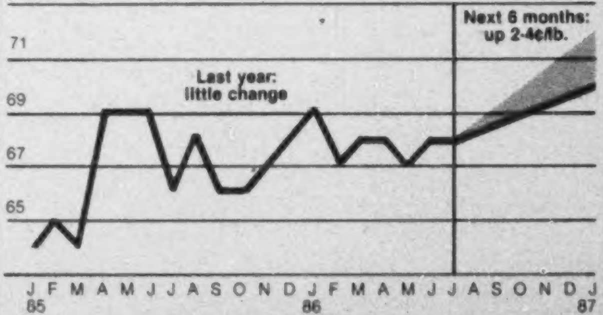
DEMAND: U.S. consumption of refined metal should run at 2.2 million tons this year—a shade above last year's level. Gains, aside from construction, could come from the electric-electronic and consumer goods sectors. Both the transportation and capital goods markets (a quarter of all copper use) will be hard put to equal last year's chewup. **A new Bureau of Mines study pegs the increase at 1.9% due to substitution**—by plastics in plumbing, fiber optics in telecommunications, and aluminum in auto radiators.

SUPPLY: There's more than ample tonnage around. Even with U.S. mines, operating at 60% or less of their potential (turning out only about 1.1 million tons a year), shortfall is being more than made up by African and South American producers who are going all out in their drive to earn badly needed foreign exchange. **Dependence on imports could rise from 24% of our needs to more than 35% by 1990.**

PRICE OUTLOOK: Any near-term advances are likely to be small—both because of the slow demand gains and more-than-ample supply. **Best bet: A slow irregular rise into the low 70s by year-end**—with another few cents added on in early 1987 if world demand holds up. Don't expect any big runup. Once prices approach 75-80¢/lb, there could be a lot of mine reopenings here in the U.S. Another price restraint: improved efficiency with some U.S. mine costs near 65¢/lb.

Producer copper

(cents/lb.)



PW PREDICTS

Facsimile machine

Count on fairly steep declines in facsimile machine prices over the remainder of the decade. A new Frost & Sullivan study says that over the 5-year period ending in 1990, tags on these versatile machines will drop from 6-19% per year.

But averages can be deceiving. Group III types—those that require one minute or less transmission time on a voice (analog) telephone network—should fall relatively slowly after the end of 1987 (see chart).

Lower tags (combined with technological improvements) will translate into a big jump in demand. Current projections made by Frost & Sullivan predict a more than 50% increase in annual shipments over the next five years—from 99,000 units in 1985 to about 159,000 by 1990.

Group III machines will remain the largest segment of the industry. They accounted for 88% of last year's shipments and will capture a 92% share by 1990.

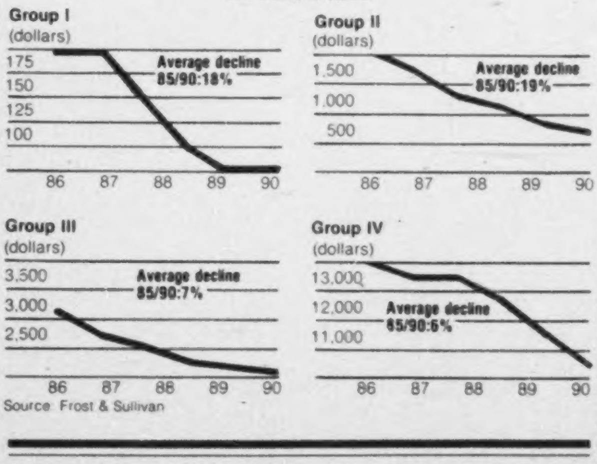
On the other hand, the slow Group I (requiring six minutes time on a telephone network) are already being phased out.

The newest types (Group IV)—which transmit in less than a minute over data (digital) lines will be slow to catch on but should accelerate after 1987 and capture 6% of the market by 1990, as digital lines become widely available over public access networking.

As for suppliers, all of the current equipment in the general business market is Japanese—and Frost & Sullivan sees no change. Note, too, that U.S. facsimile vendors are now distributors of Japanese products and some of these vendors are actually subsidiaries of Japanese manufacturers.

Facsimile machine prices

The trend is down



Source: Frost & Sullivan

market moving up to near $150/ton—well above the low 120s prevailing as recently as this past January. Co-product caustic soda is also showing signs of life—with off-list quotes targeted to advance about $10/ton. Behind the jump: improving operating rates—with the industry reported to be near the 90% level—the highest in over two years. And this key price determinant could move even higher as additional capacity shutdowns are announced.

Communications equipment

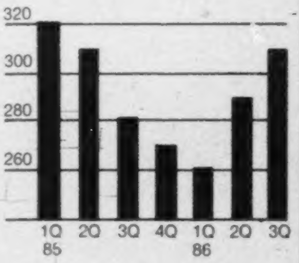
Competitive infighting in the PBX market is pushing per-line quotations down into the $500-$900 range—well under recent $1,000-$1,200 levels. While certainly not ignoring large corporate end-users with their sweeping networking and data requirements, suppliers are paying increasing attention to small and mid-range users. Competition is said to be fiercest at the low end—but good bargains are also cropping up in more expensive offerings. In any case, the squeeze is so severe that an industry-wide shakeout—occasioned by low or negative margins—may not be all that far off.

Paper

The weakening dollar—by spurring exports—is having a firming effect on prices. Signs of the times: Several mills have announced a $20/ton increase in linerboard (bringing tags up into the $310/ton range)—though it may take a few months for this new quote to become fully effective. Not surprising, end-product corrugated containers have stabilized—with even some scattered increases reported. Other quotes moving up include uncoated white paper, market pulp, and several grades of waste paper.

Linerboard

($/ton)



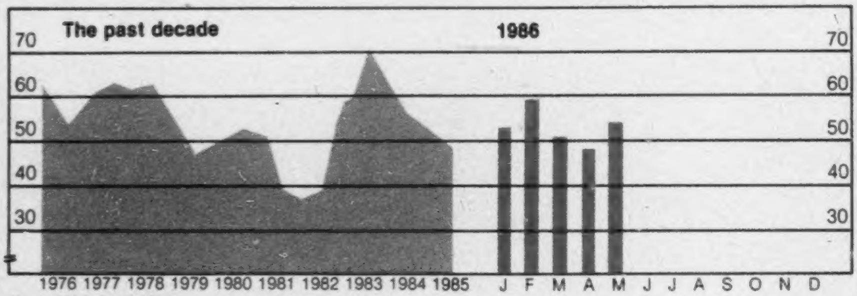
Computer-aided engineering

Hardware tags continue to decline—with quotes on some basic 32-bit workstations dropping down below $15,000—several thousand under previous levels. And further declines toward $10,000 are expected by year-end or early 1987. That's the level analysts feel will be necessary to induce companies to put one workstation on every desktop. But even then there could be selling problems—both because of obsolescence fears and the lack of standards. On the latter score, there are said to be plenty of buyers holding off—confused on which way to move.

BUSINESS DATATRAK

NAPM business barometer

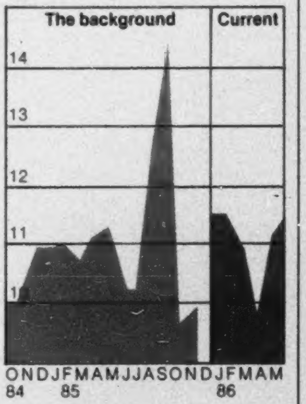
Based on five indicators (employment, inventories, new orders, production, vendor performance)



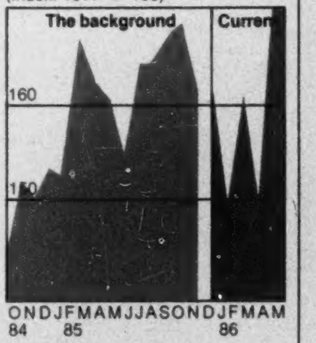
Source: Commerce Dept.

Leading indicators

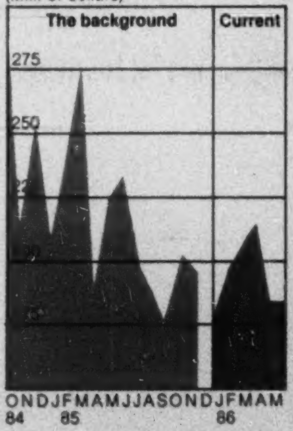
1. Auto sales
(Mil., seas. adj. annual rate)



2. Construction awards
(Index: 1977 = 100)



3. Machine tool orders
(Mill. of dollars)



KEY ECONOMIC TRENDS

Can economy's pace continue?

The next two quarters seem to be shaping up pretty much like the last two: basic underlying strength but with few indications of any really significant near-term upward surge.

True, the NAPM Business Barometer—a lead indicator of activity a few months down the pike—has improved a bit from late spring levels (see chart above). But even its latest reading of 54.4 isn't all that much above the neutral 50 mark—and it's just about on a par with levels of last year and early 1986.

The good-but-hardly-great near-term outlook is perhaps best characterized by the three economic sectors detailed in the charts on the right. Sure, the first (auto sales) seems quite bullish—with some 11.5 million cars at annual rate clearing the market during the last reported month.

But the question arises: Can this pace continue?

A positive answer is not all that certain. Thus consumers responding to a new Conference Board survey indicate they may well cut back on auto purchases in the months ahead. Specifically, only 9% say they plan on a purchase over the next six months.

The construction sector, too, may not be quite as strong as commonly supposed. Reason: While everybody is applauding housing starts (they look to jump 150,000 units this year—to near 1.9 million), people tend to forget about weakness in other areas—notably commercial and industrial building.

A more balanced overall picture here is presented by construction awards. Note how they have been zigzagging all over the lot in recent months. It's something that suggests a lack of a broad-based underpinning needed to push overall 1986 totals significantly above those of the past year.

Still a third near-term brake on major business advances would have to be lackluster producer investment. Note that for a year now, machine tool orders (a sensitive indicator of capital spending) has been bouncing along on a fairly low plateau.

The implication is clear: Capital spending isn't going anywhere—at least not over the next few quarters.

Further confirmation of a disappointing plant and equipment market comes from new appropriations (a lead indicator of actual spending). The Conference Board notes that the total came to only $24.5 billion in the first quarter 1986—down $2.7 billion from 1985's last three months.

But it's important to see the forest as well as the trees. Thus while the three sectors detailed do not seem headed for any spectacular gains in the months ahead, there are other, more basic, factors at work—ones that would seem to guarantee a continuation of the business recovery into 1987.

Indeed, it's hard to see otherwise—given such plus factors as (1) low inflation rates, (2) little or no upward labor cost pressure, (3) relatively cheap money, (4) low stock/sales ratios, and (5) good supply-demand balance.

Historically, all of the above have tended to deteriorate in the mature stages of a recovery. The fact that they haven't done so this time around cannot be underestimated.

And by next year things could be a lot better here—as rising import prices and falling export prices finally begin to show results. Right now, it looks as if the trade deficit could drop by some $40 billion—to near $100 billion—enough to add 1% or so to overall 1987 GNP totals.

Pare your warehouse costs

If you are trying to cut distribution expenses, look carefully at your warehousing operation, says a new Davis Database study. In most recent years these costs have stayed close to 1.9% of sales—despite all the new technological cost-cutting innovations.

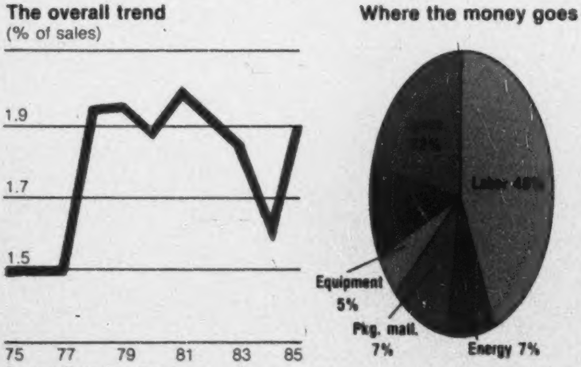
That's not to say that some firms aren't making progress in improving warehouse efficiency. 38% of the firms queried by the NJ-based consulting firm actually did manage to shrink their warehousing outlays. The average cost reduction last year was put at 19%. On the other hand, 40% of survey respondents saw their costs advance over this period by an average of about 30%.

The point to keep in mind: The difference between the average firm reducing its warehouse costs and the average firm experiencing higher costs is 49%—or 0.93% of sales.

How can one jump onto the cost-cutting bandwagon? The Davis Database survey suggests three key areas:

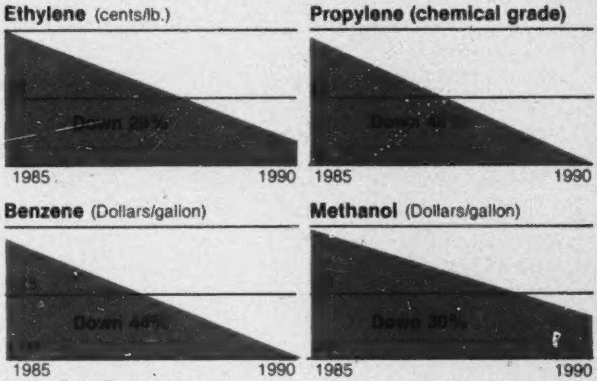
- **Improved equipment:** Swing forks, turret trucks, and other very narrow aisle equipment and reach-type trucks provide good opportunities for better storage utilization.
- **More computerization:** Small warehouse control computers, coupled with transmission systems, digital readouts, and optimizing software, are providing 25-40% labor productivity increases.
- **More reliance on reader devices:** Labor and scanner equipment can markedly improve warehouse record accuracy and tie directly into the control computers—allowing management of the entire inside materials flow.

Warehousing costs at a glance



Source: Davis Database

The 1985-90 petrochemical price scenario
(Assuming a $12.35/bbl oil price in 1990)



Source: Probe Economics

What would $12/bbl oil mean?

What happens to petrochemical prices and markets over the long pull if oil remains weak—with crude petroleum down to near $12/bbl by 1990?

Probe Economics, a Mt. Kisco, NY-based consulting firm, provides some interesting projections. Assuming this "oil crash" scenario, analysts at the firm put ethylene tags at less than 11¢/lb by the end of the decade—and polypropylene at an even lower 8¢/lb. Benzene and methanol, two other volume chemicals, will be a lot lower too—with their 1990 quotes put at near 75¢/gallon and 28¢/gallon.

Industry structure would undergo considerable change too. Overall chemical output would increase because aggregate demand moves higher and because the prices of synthetic materials (made from petrochemicals) would fall relative to the prices of natural materials.

Naptha would become the favored ethylene feedstock, resulting in large amounts of propylene byproduct. In addition, propylene alkylate would be rejected from the gasoline pool because of low gasoline prices and high natural gas prices relative to crude oil. Propylene would fall in price relative to ethylene, thereby creating a competitive advantage for polypropylene *vis a vis* polyethylene.

Elsewhere, low gasoline prices would prevent methanol and other oxygenates produced from natural gas or organic matter from finding their way into gasoline.

Also, with oxygenates and alkylates priced out of the gasoline pool, the need for aromatics as octane enhancers would increase. Result: Aromatic prices would rise relative to crude oil prices.

Finally, weak oil prices would hurt chemical producers in energy-rich areas such as Saudi Arabia. But European and Japanese chemical industries would rebound. The U.S. is caught in the middle.

CURRENT PRICES

Has oil slump run out of steam?

The downward impact of oil on overall price averages finally seems to be running out of steam.

The latest industrial producer price index, for example, moved up over the last month. True, the gain was a fractional 0.1%. Nevertheless, it's in sharp contrast to the previous three months when this bellwether inflation yardstick showed a cumulative 4% decline.

Zero in on the energy sector and you can see the reason for the change. This last month, a sharp 11.2% increase in gasoline overwhelmed continued weakness in home heating oil, jet fuel, residual oil, liquid petroleum gas, and diesel oil. The result is that overall fuel and power costs actually registered a 0.7% increase.

The basic downdrift continues in some downstream petroleum products, however. For instance, lower feedstock costs help put downward pressure on organic chemicals, synthetic rubber, and synthetic fibers and fabrics—all of which registered declines.

Elsewhere, upward and downward movements pretty much offset each other. In metals, easiness in steel and in some of the minor metals like selenium and cadmium were balanced out by rises in both lead and zinc.

Capital equipment averages were also essentially neutral—as an advance in heavy trucks was cancelled out by small declines in transformers, printing trade machinery, and steel power boilers.

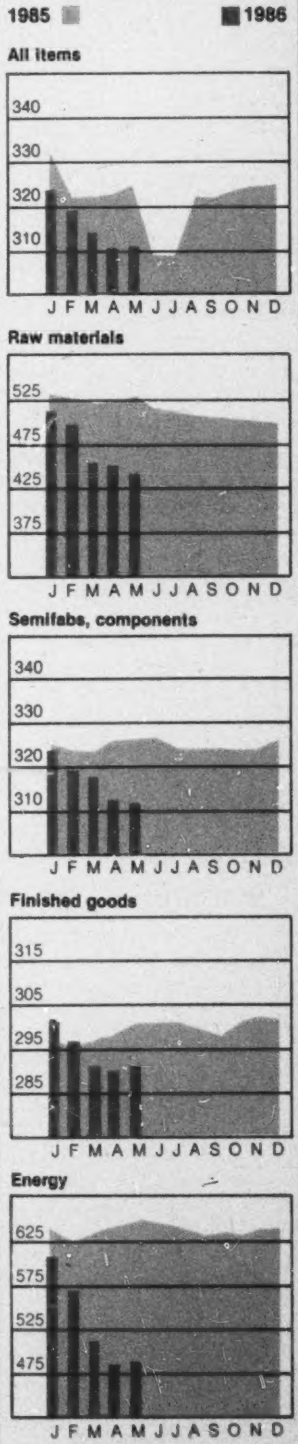
A similar trend was noted in industrial components. Electric motors, metal fasteners, and rubber belts and belting all advanced. But declines were registered for pumps and compressors, scales and balances, and tires

This month's breakdown

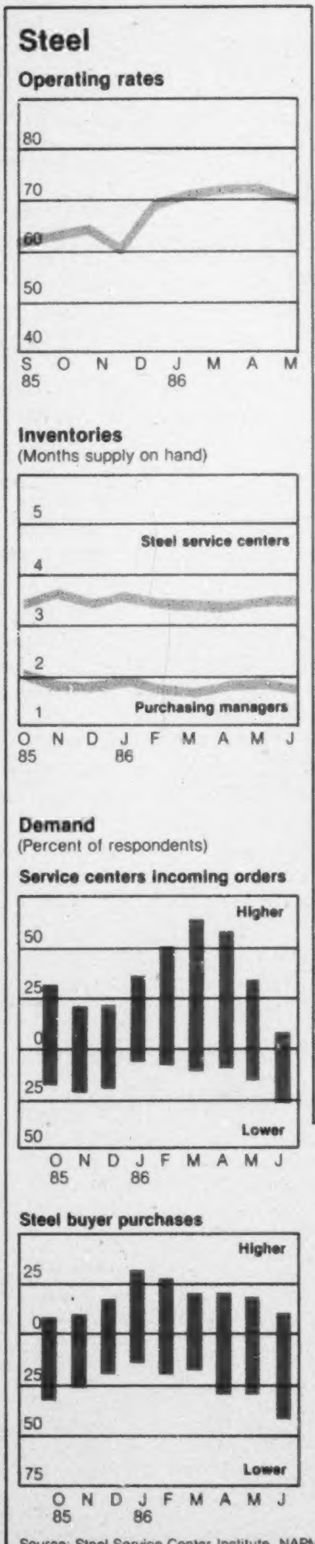
	Latest level (May)	% change from: Month ago	% change from: Year ago
Bearings	355.7	0.0	1.0
Bolts, nuts, etc	279.0	1.3	0.6
Chemicals, inorganic	296.3	0.0	−0.9
Chemicals, organic	327.4	−2.4	−7.3
Concrete products	326.2	−0.2	1.9
Corrugated cartons	263.7	0.4	−5.8
Cutting tools, small	291.6	0.3	1.8
Electric lamps (bulbs)	346.1	−0.6	0.5
Electronic components	200.6	0.0	1.6
Fans and blowers	363.0	0.1	1.1
Foundry and forge products	364.8	−0.1	0.6
Fuel oil (residual)	523.1	−6.3	−50.6
Furniture, commercial	316.3	−0.2	3.0
Gasoline	378.7	11.2	−34.3
Glass, flat	230.1	0.0	2.3
Glass containers	399.6	1.4	6.1
Gypsum products	360.3	4.4	8.2
Hand tools	382.9	0.0	2.5
Hand tools, power driven	236.8	0.0	2.8
Industrial furnaces	397.3	0.2	3.3
Integrating and measuring instruments	235.4	−0.4	1.5
Internal combustion engines	352.5	−0.1	3.6
Lubricating oil	366.8	−2.8	−1.8
Lumber millwork	316.8	0.4	2.0
Material handling equipment	296.4	0.1	0.6
Metal containers	361.1	0.1	0.9
Metal mill shapes (nonferrous)	300.1	0.0	−4.8
Metal tanks	303.4	−0.2	−0.6
Motors and generators	351.8	0.6	0.0
Motor trucks	313.0	−0.1	5.9
Office and store equipment	154.1	−0.1	−0.4
Paperboard	266.3	−0.1	−5.0
Paper boxes and shipping containers	266.4	0.3	−2.7
Paper office supplies	239.6	0.3	−0.1
Paint	280.9	0.0	1.7
Plastic resins	294.5	−0.2	−3.6
Precision measuring tools	266.8	0.0	1.4
Pumps and compressors	359.6	−0.4	1.0
Refractories	373.1	0.1	0.5
Rubber belts and belting	338.1	0.5	−4.8
Scales and balances	231.1	−0.3	0.7
Steel products	347.6	0.8	−4.6
Switchgear	286.0	0.1	1.7
Textiles, synthetic fibers	149.8	−1.1	−4.6
Textiles, gray fabrics	150.6	−0.2	−1.0
Tires and tubes	235.7	−0.3	−1.4
Transformers and power regulators	232.7	−0.8	0.1
Welding equipment	300.2	0.1	3.0
Wire and cable	206.9	−0.1	1.3

Industrial prices

(Index: 1967 = 100)



Source: Bureau of Labor Statistics



Steel

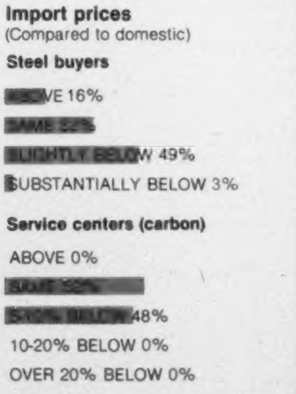
Operating rates

Inventories
(Months supply on hand)

Demand
(Percent of respondents)

Service centers incoming orders

Steel buyer purchases



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

and tubes.

About the only sector showing any meaningful rise was construction materials—with gains reported in lumber millwork, gypsum, asbestos, and cut stone. But even here there were partial offsets—principally in plywood and plastic plumbing products.

What about the next few months? One government spokesman says he expects pretty much the same overall pattern. He feels, for example, that gasoline tags will level off—and that the normal summer demand slowdown will keep suppliers from boosting prices on most industrial products.

STEEL SCENE

Summer hike curbing demand

The summer slump is expected to put its usual damper on steel demand, say both buyers and distributors. In the latest NAPM steel survey, 42% of metal buyers see decreased metal receipts ahead—more than four times the 10% who feel some near-term increase is likely.

Figures from the latest Steel Service Center Institute (SSCI) survey aren't much better. Distributors who anticipate declines in the incoming orders outweigh those who see increases by 26% to 9%.

But, as noted above, this could be due to seasonal factors. Andrew G. Sharkey, SSCI president, observes that "those who anticipate higher economic activity in the coming months still outnumber by two-to-one those with similar views a year ago."

The drop-off in demand may not reflect a decline in consumption so much as it does a shift back to inventory paring. Thus buyers now report just a bit over a 1¾ month steel supply—a significant drop from the near 2-month inventory level of the previous two months.

More important, the "inventory" effect on demand is likely to persist through 1986. Some 42% of PMs queried, for example, now contemplate steel stock reductions over the next six months—and not one single buyer is planning on any off setting increases.

Part of this inventory paring is probably due to a feeling of security about supplies and today's relatively short leadtimes. Few buyers seem concerned about availability—with the possible exception of scattered fears in the coated sheet area.

Not surprising, service centers feel quotes are too low to permit adequate profits. Specifically, 32% of responding distributors are reporting lower gross margins than in the previous three months.

According to Sharkey, the service center industry's net profit margins for the past five years have averaged out at only near 1%—far under the 2.4% average figure of the past 30 years.

But cost pressure on these margins could soon be easing. Roughly half of the SSCI survey respondents (51%) now feel they can hold steel replacement costs over the next six months at or below current levels compared to 12% last month and 32% the month before.

This has to be good news for buyers because it suggests that purchase prices of steel won't be increasing. The failure of a hike in spring flat-rolled carbon steel also points in this direction, as do reports of discounting in recently boosted stainless flat-rolled products.

But steel buyers seem to be having more difficulty finding overseas bargains. Only 52% are now finding price breaks on imports and only 3% say the breaks are significant. Just two months ago, 61% were finding significant bargains overseas.

The decline of import bargains is also confirmed by service centers. For carbon steel, only 48% report import bargains and the discounts are all in the low 6-10% range. Compare this to three months ago when the comparable figure was 86%—with 4%

estimating the savings in the 11-20% range. The same trend is noted in overseas stainless.

There's also some indication that foreign sellers are not pursuing the U.S. market with their past vigor. 35% of the buyers and 13% of the service centers now say overseas mills are less active—with only 3% of both groups citing an increase in foreign selling.

PROCUREMENT STATUS

More speedups than slowdowns

The summer doldrums are back once again—with more-pervasive-than-ever buyer markets and even some further shrinkage in delivery times.

On the latter score, more buyers again report speedups than slowdowns—reversing the modest stretchouts indicated during the previous few months.

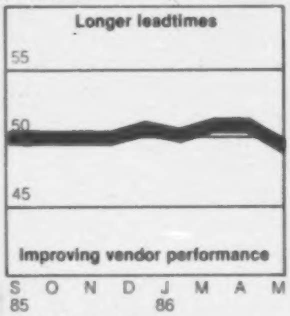
In a similar vein, PW's exclusive leadtime index is currently being clocked in at only 49—below the neutral 50 mark for the first time in a year. Implication: PMs reporting shrinking leads again outnumber those experiencing longer ones—albeit by only a modest margin.

And still more evidence comes from the latest NAPM Business Survey Committee "buying policy" tally. At latest report, 21% were buying hand-to-mouth—up from 16% one month earlier. And at the other end of the spectrum, only 13% were committing 90 days or more in advance—down from the 16% reading of the previous month.

Monthly procurement status report

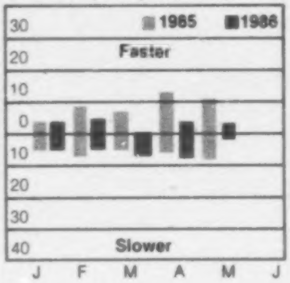
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



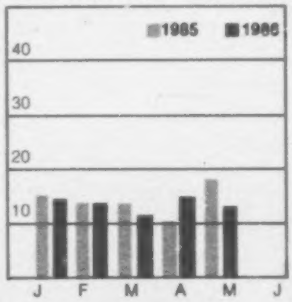
Delivery performance

(Percent reporting deliveries)



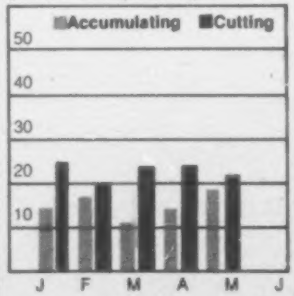
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

Then, too, there's the dearth of items on the NAPM short-supply list. At last count, only one item, titanium dioxide, was noted as being tight. Point to keep in mind: This has been the only item to be so reported in almost a year and a half.

Nor do buyers expect any dramatic change come September and October when business normally picks up. One Gulf Coast PM says there could be some isolated stretch-outs. But given today's current oversupplied situation—plus a continued strong import flow—it now looks good for at least the end of the year.

The nation's factory operating rates would certainly seem to confirm this conclusion. Virtually every single one of the categories monitored by the Federal Reserve Board shows utilization running well under preferred levels—with little indication of anything more than a fractional creepup in the months ahead.

What about the longer pull? PW asked a special question in this month's procurement survey: Do you see any basic change in availability during the second half of 1987—when the recovery will be well into its fifth year? The answers: 91% "no," 7% "maybe," and only 2% "yes."

It's a situation that also helps explain continued inventory paring on the part of PMs. In any event, parers have outnumbered accumulators for almost two years running.

But this may be about to end—not because of supply worries but rather because stocks are now at rock-bottom levels—and will have to be augmented if companies are to keep up with the somewhat higher production schedules seen ahead. In the words of one buyer: "Tonnage may be going up a bit, but day's supply will stay pretty much where it is now."

Leadtimes and availability

Chicago: A mixed picture here. Aluminum waits have dropped—reflecting end of hedge buying—with most items obtainable from stock or within 6-8 weeks. But copper products are out, with special sheet and coil needing 3-7 weeks. H-r steel is in a week (to 4-5), but narrow coated galvanized is out—to 7-8.

Cleveland: Gasoline and greaseproof papers are in a bit—to about 2-5 weeks. But some forms of plastic packaging have edged out to 4-6. But no change in shrink film (on demand) and PVC resins which have actually come in to 1-2. Also relatively easy: alloying material (on demand) and lumber (1-3 weeks).

Los Angeles: Things remain easy across the board—with key items available with these weekly leads: Galvanized steel (12-14), grey iron castings (8-10), brass castings (6-8), paints (3-5), standard fasteners (4), standard bearings (20-24), standard valves (10-12), steel strapping (2), and plastic resins (8).

Houston: Slack oil patch demand is keeping waits at these minimum weekly levels: High pressure heat exchangers (17-34), shop fabricated

BUSINESS DATATRAK

carbon steel pipe (9-26), corrugated boxes (2), motor control centers (13-26), component parts (1-8), stainless fasteners (8-10), plastic bottles (4), and polypropylene (2-3).

Philadelphia: Some copper products have moved out—with waits on alloy tube as well as sheet and plate put in the 8-10 week range. But this is regarded as only temporary. No worries in steel, either—with (1) carbon bar hex and round shapes available in 14 and 6-8 weeks, respectively, and (2) stainless coil in 10-12.

Pittsburgh: Pretty much the status quo—with typical weekly waits as follows: corrugated, folding, and wirebound boxes (all 3-4 weeks), multiwall bags (6), all types of drums (1), plastic packaging material (2-3), lumber (3-4), coil-coating paint (4), steel strapping (2-3), PE and PVC resins (5-6), and manganese (8).

Leadtimes (in weeks)

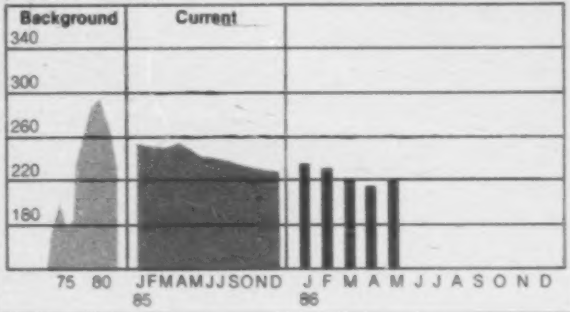
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	7½	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	2½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	4	3
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	7
Galvanized (Chgo)	7½	7½	7
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	9	9	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14½	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	11	11	11
Motors (Phil)	10	10	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	3
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	3
Softwood (Phil)	⅓	⅓	⅓
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Napthalene (Chgo)	2	2	2
Paint (LA)	4	4	1½
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	1½	2½	3½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	3½
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	12	12	10
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	12	12	9
Brass Castings (LA)	7	7	5
Brass Rods (Chgo)	7½	7½	5
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	8	8	9
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	4½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	1
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	7	5
Fasteners, Std. (Phil)	2½	2½	2
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	33
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	2½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

(Index: 1967 = 100)

Latest month	221.3
Month before	291.9
Year ago	252.0



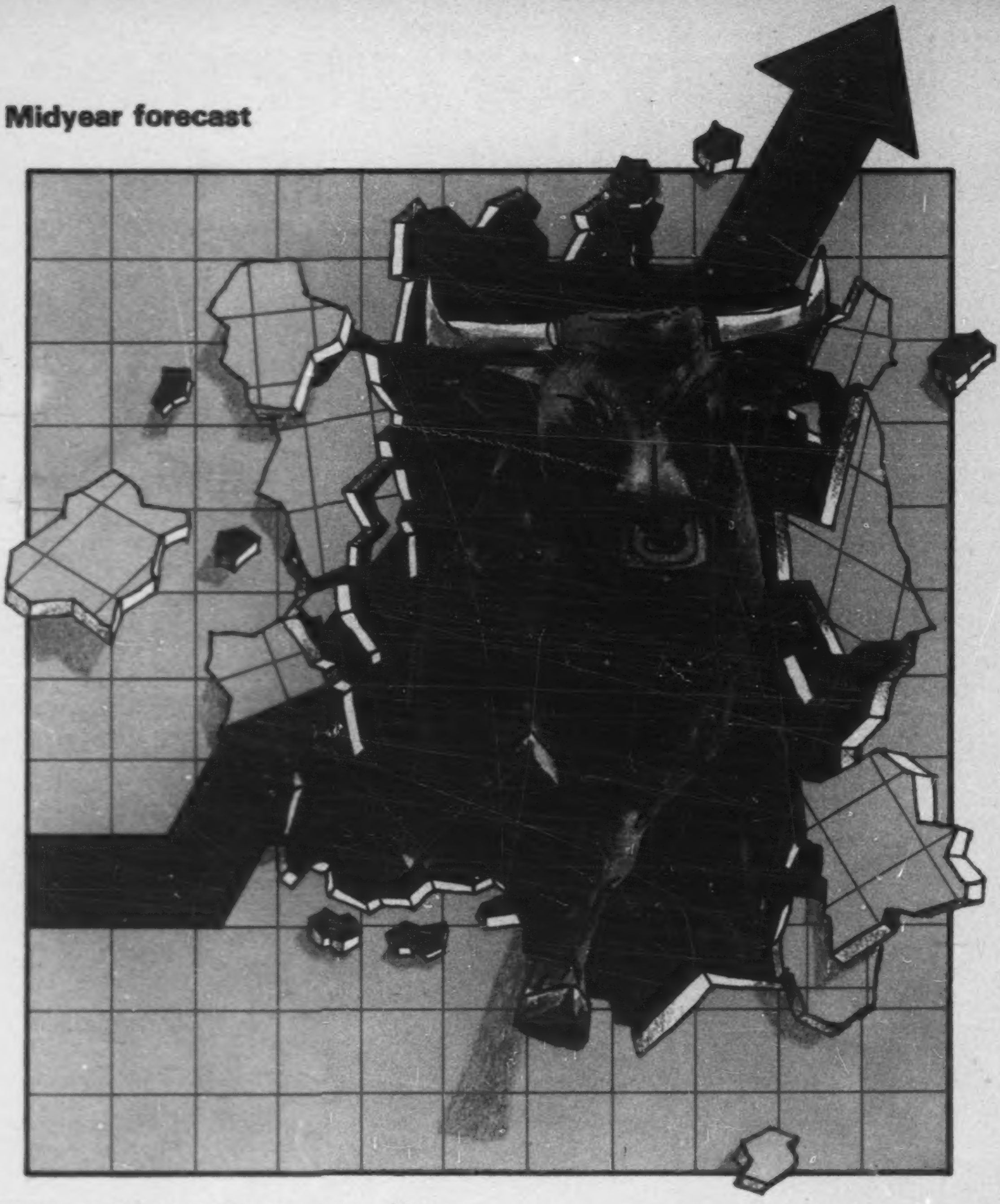
Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	29.25
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	25.90	25.90	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.585	.595	.500
Antimony, in alloy, lb.	1.32	1.35	1.32
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.35
Brass, red, 85%, [sheet], lb.	1.32	1.32	1.32
Brass, yellow, [sheet], lb.	1.27	1.27	1.27
Cadmium, ton lots, lb.	1.19	1.30	0.82
Copper, electrolytic, wire bars, refd., lb.	.68	.68	.69
Copper sheet, over 24 in., lb.	1.41	1.41	1.41
Lead, common, N.Y., lb.	.205	.190	.190
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	244.00	253.00	295.00
Molybdenum, oxide, dealer, lb.	2.70	2.75	3.73
Nickel, cathode, dealer, lb.	1.94	1.90	2.51
Platinum, dealer, oz.	443.00	412.00	272.00
Silver, N.Y., oz.	5.47	5.23	6.18
Tin, Straights, N.Y., lb.	2.57	2.62	5.46
Zinc, Prime West, East St. Louis, lb.	.38	.33	.44
Zinc, die casting alloy, No. 3, lb.	.445	.415	.505
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.34	16.27	16.50
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	550.00	550.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.237	.237	.324
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.045	1.045	1.040
Cotton middling, 1", N.Y., lb.	.655	.645	.594
Printcloth, 48", 80x80, N.Y., spot. yd.	.70	.68	.60
Army duck, 37", 13 oz., yd.	1.48	1.46	1.70
Blended printcloth, 64", 78x54, yd.	.80	.80	.70
20s combed yarns	2.05	2.05	1.95
Wool tops, N.Y., lb.	2.00	2.00	2.10

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.455
Ammonia, anhydrous, tanks, Gulf Coast, ton	90.00	100.00	N.A.
Benzene, petroleum, tanks, Houston, gal.	.82	.74	1.48
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.52	.52	.54
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.290	.325	.28
Polypropylene, homopolymer grade (market price), lb.	.340	.345	.330
Polystyrene, general purpose grade (market price) lb.	.31	.32	.35
Polyvinyl chloride, pipe grade (market price) lb.	.285	.285	.300
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.21	.21	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb.	.73	.73	.69
Xylene tanks, gal.	1.36	1.36	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	328.65	326.40	303.95
Lumber 2x2 pine, mbf, cl	321.60	323.60	304.60
Plywood, plyform, ¾", msf, cl	595.65	598.70	571.80
Plywood, ⅝", msf, cl	387.55	389.40	378.50
Cement, bulk, ton, tl	66.70	65.69	64.94
Sand, ton, cl	6.60	6.57	6.24
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	47.82	47.45	47.74
Crushed stone, 1½", ton, cl	7.98	7.98	7.63
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.83	0.83	0.81
Gypsum sheathing, ½"x1"x8", msf, tl	217.52	217.87	207.94
Brick, common, per thousand, tl	184.96	186.91	181.10
Asphalt paving, AC-20	158.08	162.69	175.36
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.09	7.07	7.23
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	9.35	8.50	20.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	15.40	14.75	25.50
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.580	.603	.830
Gasoline, 94 oct., reg., Chi., tank car, gal.	.540	.545	.833
Heating oil, No. 2, Chi., bulk, gal.	.405	.453	.747
Heating oil, No. 2, N.Y., bulk, gal.	.858	.878	.818
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.360	.420	.670
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.270	.290	.355
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	70.00	71.00	69.00
Steel, No. 1 hvy., dlvd., Chi., ton	70.00	73.00	62.00
Copper, No. 1, East wholesale buy, dlvd., lb.	.590	.585	.545
Copper, No. 2, East, wholesale, dlvd., lb.	.510	.505	.460
Brass, red, East, wholesale buy, dlvd., lb.	.550	.545	.505
Brass, yellow, East wholesale buy, dlvd., lb.	.300	.300	.325
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.290	.340	.290
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.320	.370	.320
Zinc, old, East, wholesale buy, dlvd., lb.	.150	.150	.140
Lead, clean solids, East, wholesale buy dlvd., lb.	.115	.108	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	15.00	15.00	12.00
Paper, old corrug. box, dlr., N.Y., ton	12.00	12.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.095	.100	.100
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.110	.120	.230

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Midyear forecast



Compiled by Robert S. Reichard, executive editor

The bulls may not be running at Pamplona today, but the economy is showing surprising strength in this fifth year of expansion.

Not that anyone is in danger of being trampled in the mad dash to excess that has characterized earlier recoveries. In fact, some key sectors of the economy continue to suffer from depressed markets, tough competition from imports, and in ability to make price increases stick. For PMs, tough negotiation continues to bring rewards as prices remain under pressure, inflation is low, and expectations are for more of the same.

Here are highlights of *PW*'s mid-year economic report:

- Dr. Louis J. Paradiso, *PW*'s eminent prognosticator, says that the basic business trend will remain up at least into early 1987 and prices will remain level.
- The nation's big econometric models—Wharton, DRI, Merrill Lynch, and Chase--agree that forecasts for the economy should be revised upward.
- A new nationwide survey of PMs finds them flexing their muscles and demanding cost justification for virtually every price boost.
- The nation's top executives have raised their expectations for demand more than a percent and a half from just six months ago.
- Broad-gauge price indicators may not tell the whole story over the next few years.

Nobody has tamed this bull economy yet

The life of a forecaster isn't all that easy. (Who says it should be any easier than that of the purchasing manager looking to his future needs?) Dr. Louis J. Paradiso, ***PW***'s eminent prognosticator, emphasizes that pinpoint forecasting is becoming a lot more difficult these days, because of big swings in the dollar and interest rates, the uncertainties of the budget and trade deficits, and possible effects of a tax reform bill.

Another problem stems from the wide variations in performance among various sectors. The electronics sector seems to be coming on strong again, while the smokestack industries such as steel are still fighting hard to stay even.

Another problem for forecasters is what Dr. Paradiso calls the "deteriorating quality of business statistics." Repeated GNP revisions make near-term projections a bit risky, he says. And this is being exacerbated by recent cost-cutting moves at the Commerce Department and the Bureau of Labor Statistics.

Expansion endures

The basic business trend is still up and is likely to stay that way through the end of this year and into early 1987. But Dr. Paradiso warns that not everything is coming up roses. Growth will be slow and relatively uneven and the inflation rate could well pick up a bit, as crude oil tags bottom out.

However, the veteran business analyst isn't very concerned about prices. As he puts it, "Remove the oil impact, and underlying price pressures will be much the same as they were before January."

With that in mind, here's a quick rundown of what ***PW***'s economic consultant sees for the quarters immediately ahead:

Real growth: GNP will advance 2-3% at annual rate through mid-1987. The comparable figure for industrial production will edge out slightly lower at 2-2.5% annual pace.

Inflation: With oil prices stabilizing, finished producer prices will begin to advance again after the negative figures of the first half. Best bet is for an annual rate of 2.5-3% over the next four quarters. The GNP price deflator, which includes a large service component, should advance at a slightly higher 3% + rate.

Labor costs: Few problems are anticipated here. Pay rates will rise at only 2.5-3% at annual rate. But with productivity rising almost as fast, the increase in unit labor costs will be negligible—probably under 0.5% at annual rate.

Inventories: Current low stock/sales ratios will continue. Because sales will be edging up, some modest increases in inventory volume may occur, but *only* because the stock /sales ratio (day's supply) is at rock-bottom levels.

Capital spending: Non-residential fixed investment (in constant dollars) will advance only 2-2.5% over the next year or two. While positive, that's a far cry from the 19.5% increase in 1984 and the 9.5% increase in 1985.

Interest rates: They are probably as low as they are going to go. In fact, the prime rate might even inch up above 9% by early next year. The same goes for mortgage rates which seem to be bottoming out at 10%.

International trade: The weakening dollar will eventually have an impact on reducing the trade deficit. But don't expect too much. The red ink will still flow to the tune of about $120 billion (at annual rate) by the year's end.

The whole story

Looking in more detail, here are Dr. Paradiso's projections, observations, and comments on how he sees the economy shaping up in the next four quarters.

Economic growth: Real GNP will record moderate gains in the second half of 1986 and the first half of 1987. But the accent is on the word "moderate" because rates will fall short of levels needed to make a substantial dent in either the federal deficit or unemployment rates.

On the other hand, there are enough positive signs to assure continued momentum for expansion. These include relatively low interest rates, very modest inflation, and the weakening dollar *vis-a-vis* other major currencies.

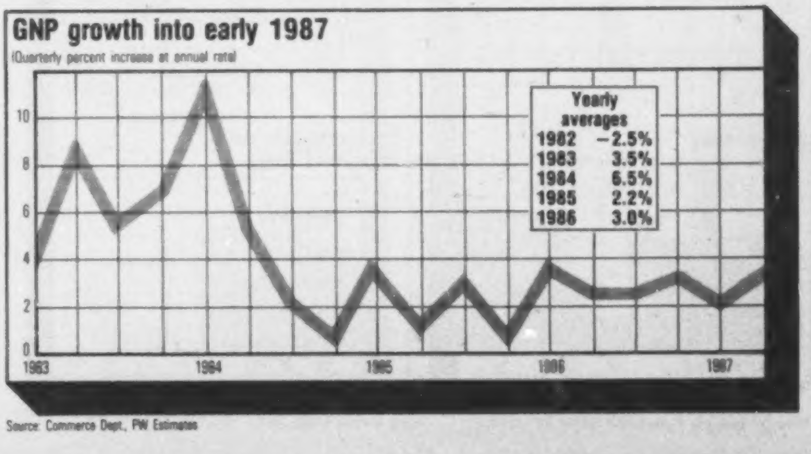
Projected annual rates of real GNP growth

- 3Q 1986—2.5%
- 4Q 1986—3.0%
- 1Q 1987—2.0%
- 2Q 1987—3.0%
- All of 1986—3.0%

Industrial production will follow a similar pattern

- 3Q 1986—2.0%
- 4Q 1986—2.3%
- 1Q 1987—2.5%
- 2Q 1987—2.7%
- All of 1986—2.0%

...continued



GNP growth into early 1987

(Quarterly percent increase at annual rate)

Source: Commerce Dept., PW Estimates

Overview

Price trends: Falling oil prices have definitely helped reduce the inflation rate. First quarter 1986 showed only a 2.5% increase in the GNP price deflator—significantly under the 4.1% in 1984 and 3.3% rate in 1985.

But with oil stabilizing, or even rising a bit, an annual rate of gain of 3% is projected for the second half of 1986, enough to push the annual average for 1986 to near 2.8%. Increases could also accelerate into the 3-3.5% range in early 1987.

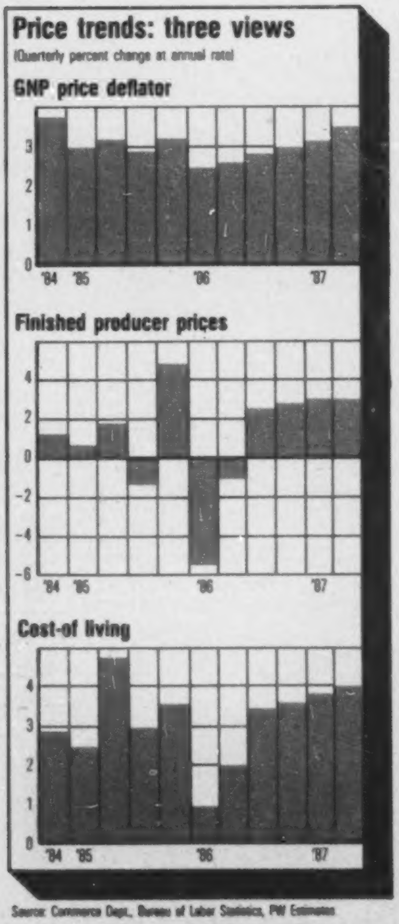
As for producer finished goods, the declines of recent months seem to be over as oil bottoms out. The annual rates of increase over the next two quarters are 2.5% for 3Q and 2.8% for 4Q. This will balance out the declines in the first half and keep the yearly average near 1985 levels. And increases could come up to nearly 3% at annual rate in early 1987.

In 1985, consumer prices rose 3.8%, led by a big 6.7% jump in medical care costs. For the current year, a 2.5% increase is expected, but look for a rising trend following this pattern:
1Q—1%, 2Q—2%, 3Q—3.4%, and 4Q—3.6%.

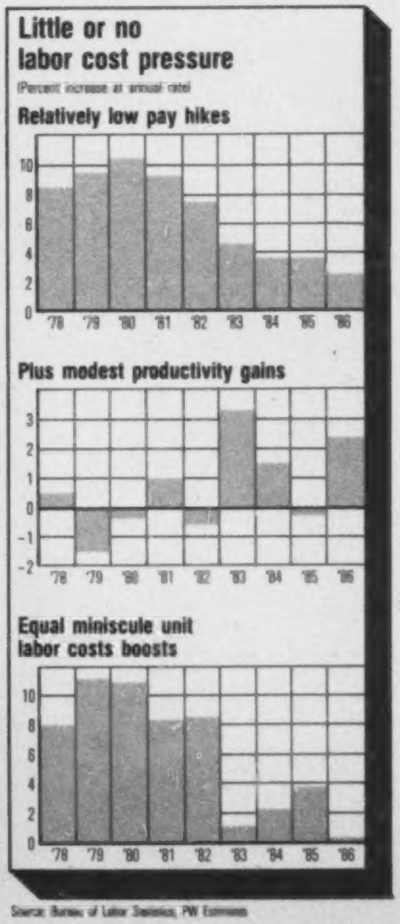
By early 1987, the annual rate should be running about 4% as gasoline prices again approach the $1/gallon mark.

Labor costs: Wage rate boosts in nonfarm businesses have fallen sharply over the past two years in keeping with the slowing inflation rate. In both 1984 and 1985, wage rate gains were only 3.7%. In the first quarter of this year the figure dropped to 2.4% at annual rate.

Since prices will not rise significantly over the next four quarters and low rates of output will prevail in a number of industries, many workers will opt to forget about wage increases or even accept wage cuts rather than be laid off.


Price trends: three views
(Quarterly percent change at annual rate)
GNP price deflator
Finished producer prices
Cost-of living

Source: Commerce Dept., Bureau of Labor Statistics, PW Estimates


Little or no labor cost pressure
(Percent increase at annual rate)
Relatively low pay hikes
Plus modest productivity gains
Equal miniscule unit labor costs boosts

Source: Bureau of Labor Statistics, PW Estimates

Wage rate increases may average only 2.4% in the third quarter of 1986 and 2.5% in the fourth quarter. In early 1987 the figures should climb to 2.8% in the 1Q and 3.0% in the 2Q.

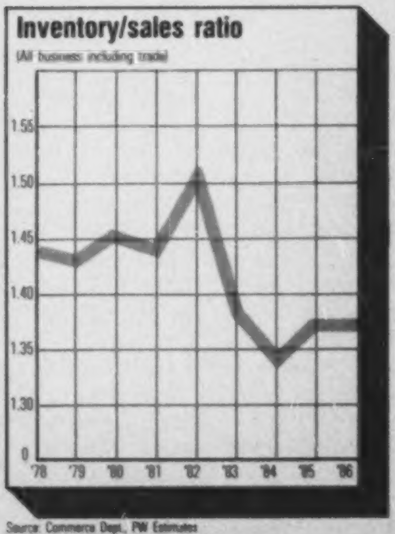
The productivity offset must also be factored in. In the first quarter of this year, the average rate of increase in efficiency was a respectable 3.8%, mainly due to the boost in output. But this may be overly optimistic since quarterly data are unreliable guides.

Modest productivity gains may be expected in the next 12 months as follows:
3Q 1986—2.3%, 4Q 1986—2.5%, 1Q 1987—2.5%, and 2Q 1987—2.6%.

Superimpose these productivity advances on wage cost boosts and unit labor cost increases and it looks like little or no change will occur for the rest of this year, and only about 0.5% increase for the first half of 1987 at annual rate.

After mid-1987, however, these costs may accelerate as profits, productivity, and prices all rise moderately. This, in turn, will prompt workers to increase their wage demands.

Inventories: Stocks are deliberately being kept lean by business firms. In manufacturing and trade, the ratio of inventories to sales held at only 1.37 in 1985 and early 1986. This is in contrast to the normal ratio of around 1.45 of earlier years. As


Inventory/sales ratio
(All business including trade)

Source: Commerce Dept., PW Estimates

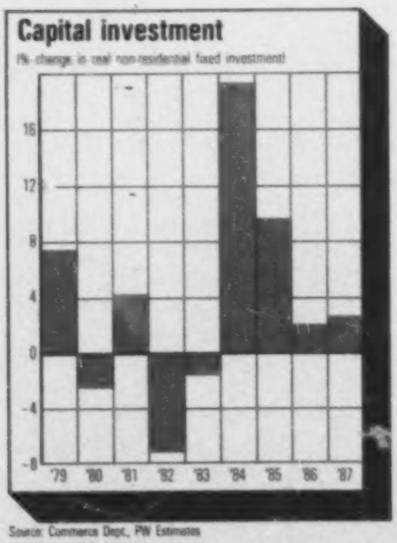
sales pick up in the next 12 months, some moderate build-up of stocks may occur. But this probably won't happen before late 1986 or early 1987 when firms will finally move to avoid being caught short.

Capital investment and capacity: Non-residential investment, which rose 19.5% in real terms during 1984, showed only a 9.5% advance last year and actually declined fractionally over the latest quarter. The slowdown can be attributed to such factors as worries about near-term economic prospects, uncertainty on new tax legislation before Congress, and current relatively low factory utilization rates.

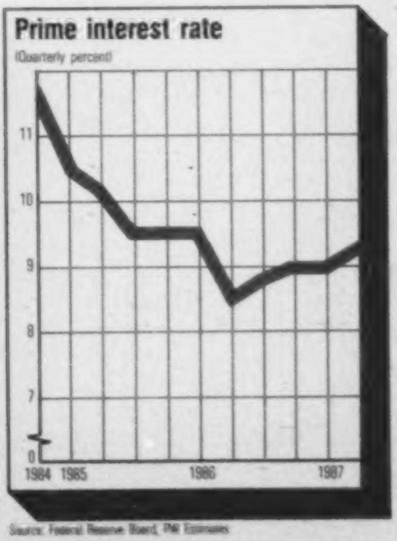
In any case, capital goods programs are now primarily aimed at renovating and modernizing rather than expansion. Also, the oil refining and many related industries are now pulling in their investment horns.

Outlook for all of 1986 is for the increase in capital goods outlays to settle around 2.0%. And next year's gain will probably hold around 3%.

What does this mean for capacity expansion? Very little. McGraw-Hill puts the gain at 2% for the current year. But even this may be too optimistic. On the other hand, this shouldn't create any supply problems because industrial production will also be rising at a relatively low 2-2.5% annual rate so operating rates are likely to remain low—certainly well under preferred levels.



Source: Commerce Dept., PW Estimates



Source: Federal Reserve Board, PW Estimates

Dr. Paradiso's own estimates here call for only about an 81% operating rate in the second half of the current year—with maybe another 1% increase in early 1987. While this is certainly a step in the right direction, it won't be enough to induce any significant increase in capital goods spending.

Spending: Civilian job totals rose by a substantial 4.2 million in 1984. But the increase dropped to only two million last year. And the 1986 increase should also be in the neighborhood of 2 million. Most of the increases last year were in the service sector—with manufacturing showing little or no change. Expect this trend to continue.

Meantime, the rate of unemployment dropped from 7.4% in 1984 to 7.1% last year. That's where it is now as new entries into the job market offset new job opportunities.

Interest rates: Rates declined sharply over the past 12 months. Three month Treasury yields dropped from over 8.5% in early 1985 to just under 6% last month. And other securities are following suit. As a result, the FRB rediscount rate has dropped to close to 6.5%, with the prime rate charged by banks off to 8.5%.

These low rates resulted from the sluggish loan demand by businesses as inventories were kept tight and expansion of capital goods programs were held down to essential needs.

As the economy strengthens in the coming 12 months, interest rates will show an upturn with the prime rising to 8.75% in 3Q 1986 and 9% by year end. It should hold there through 1Q 1987, but may rise to 9.25% by next spring as (1) loan demand expands to replenish inventories and (2) the volume of Treasury securities falls off a bit.

Housing: Mortgage rates, which follow the general interest rate trend, hold the key here. As might be expected, these rates have dropped sharply from the high of 15% a few years ago to near 10% currently. This, in turn, has induced homeowners to refinance their mortgages and has spurred many first time buyers to buy new homes.

New private housing starts, which totalled only 1.75 million in 1984 and 1.74 million last year, have jumped to almost two million at annual rate in recent months.

In 3Q 1986, mortgage rates are not likely to change much. But some subsequent advance to 10.5% is seen by late in the year. A further rise to near 11% by mid-1987 is also possible. This should cause housing starts to ease back into the 1.7-1.8 million unit range by sometime next year.

Consumer spending: In 1984, personal consumption increased 8.7% in current dollar terms and 4.4% in real terms. Last year, gains dropped to 6.6% and 3.3%, respectively. And in 1Q of this year, there was little change in all major categories of durable goods spending in current dollars—though outlays for services continued to show some gains.

The savings rate, to a large extent, will determine future trends. Right now, the key ratio appears to be edging lower. After a high of 7.5% in 1981, the rate fell to 4.6% in 1985. That's very low compared to other industrialized countries.

In 4Q 1985, it dropped to 4.0%, but came back up to 4.3% in 1Q 1986. Some further increase will undoubtedly occur over the rest of the year and into 1987 as consumers repay outstanding debt.

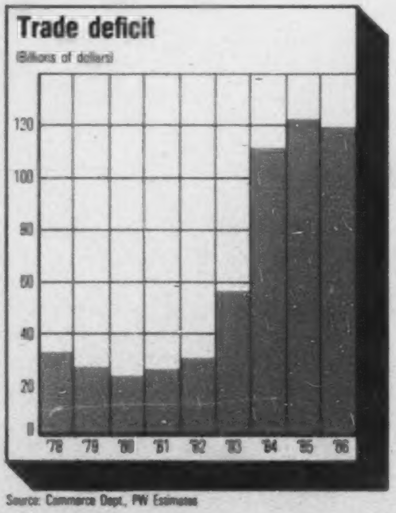
Automobile sales seem to have peaked in 1985 at 11 million units (of which 8.2 were domestically produced). Expect 3Q sales to average near 10 million units at annual rate, with the last quarter showing about 9.5 million total. And that level is likely to persist into early 1987.

Budget deficit: Red ink figures will continue to run at close to a $200 billion annual rate for the remainder of the year. On the other hand, the deficit may drop to a rate of $180 billion in the first half of 1987. The exact amount will depend on the completion of congressional action on both the budget cutting and tax reform.

Trade deficit: Merchandise exports (GNP basis) totalled $224 billion in 1984, while imports totalled $336 billion, resulting in a trade deficit of $112 billion. Last year, exports dropped to $219 billion while imports rose to $341 billion—pushing the gap to $122 billion. In fourth quarter 1985, the deficit expanded to $157 billion at annual rate, as imports rose to $373 billion and exports dropped further to $217 billion.

However, with a weakening dollar, exports rose to $223 billion at annual rate in early 1986, while imports fell to $366 billion, dropping the red ink figure to $144 billion.

Further improvement is likely in the last half of 1986 when deficits are put at $125 billion (3Q) and $120 billion (4Q). Though the dollar will stabilize, the trade deficit will continue to shrink—albeit slowly—falling to $115 billion in first quarter of 1987 and $100 billion in the second quarter. ***PW***



Source: Commerce Dept., PW Estimates

Thumbs up for buyers

A little optimism is going a long way with the nation's top corporate executives.

They say that demand will rise an average of about 5% this year. This is significantly higher than their 3.4% estimate made just six months ago. Moreover, 1986 inflation projections for manufactured goods have been toned down—from 2.7% six months ago to only 0.7% at latest report. That's what the latest McGraw-Hill survey of top executives is showing.

About the only disconcerting note is the fact that capital spending still looks rather lackluster. Overall plant and equipment outlays in real terms, for example, are expected to decline by about 4% this year—not all that much improvement over the 5.5% decline indicated when these same executives were queried last year.

In the price sphere, the aggregate 0.7% increase noted above is somewhat misleading because it is distorted by a 20% decline in petroleum product tags. Eliminate this and things look different. Significant price deceleration is only apparent in a few energy-related sectors such as chemicals and electric utilities.

The point to keep in mind is that downward adjustments have been relatively minor. This is certainly true in aggregate durable goods where the previous 2.7% price increase projected for 1986 has dropped only 0.3% (to 2.4%). And most of the individual durable goods lines continue to show increases in the 2-4% range.

Plant and equipment price boosts are expected to hold in a similar range. For example, average capital goods costs for all manufacturing sectors is put at just over 3% this year. But there are exceptions. In a few weak areas such as nonferrous metals and mining, only fractional (less than 0.5%) plant and equipment price advances are anticipated.

This kind of sector-by-sector variation also shows up in the demand sphere. Biggest boosts are seen for petroleum products where sharply lower prices are expected to stimulate a double-digit real sales advance in 1986. Above average gains are also seen for fabricated metals (7.6%), instruments (6.4%), and pulp and paper (6.0%).

On the other hand, some sectors are expected to decline—4.5% in the mining area and 1.6% in the case of iron and steel. Gas utilities demand is also slated to fall—probably reflecting the substitution of cheaper oil in many applications.

A few words are also in order on capital equipment spending trends. Part of the relatively disappointing projection can in all likelihood be traced to lower oil prices which have apparently discouraged new oil patch investment.

It's certainly hard to shrug off the fact that capital spending in this sector is targeted to drop by close to 25% this year.

But even if you eliminate the "petroleum effect," the capital spending picture remains far from buoyant. Note, for example, that total current dollar outlays (excluding oil) are expected to rise by only about 1% this year.

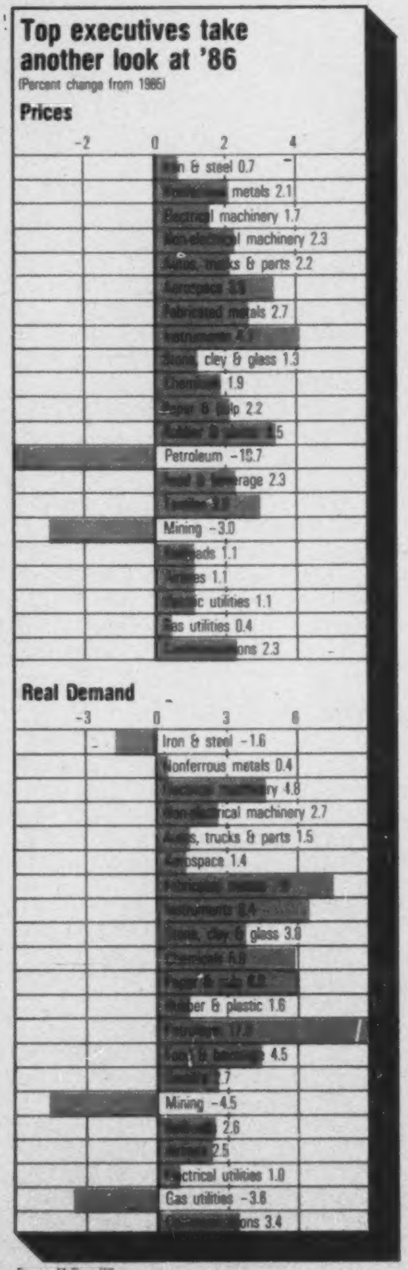
This pervading sluggishness in new investment outlays can in large part be attributed to today's relatively low 77% factory operating rate—a figure that is some 15% under the 90% + levels at which most manufacturers prefer to operate.

Given this hefty capacity excess, it should come as no surprise that American firms will allocate only 26% of their capital budgets for expansion in 1986—the lowest percentage on record. This, in turn, will slow down gains in real physical capacity—to less than 2% this year—sharply under last year's 4.8% jump.

Even this doesn't tell the whole story. Iron and steel capacity is likely to decline almost 7% as continued plant closings far exceed the marginal amount of new potential expected to come on stream.

On the other hand, 1987 could see some turnarounds in capacity—survey results show a fractional gain in steel. More important, aggregate manufacturing potential is projected to advance 3.7%—probably enough to keep overall operating rates from rising much above the 80% level.

Other things being equal, this should be low enough to assure another year of more-than-ample supplies—and thus continuation of one of the longest buyer's markets in post-war history. ***PW***


Top executives take another look at '86

(Percent change from 1985)

Source: McGraw-Hill

Commodities forecast

Prices will send mixed signals in '87

Broad-gauge price yardsticks could be somewhat misleading over the next few years. That's what a close look at price projections prepared exclusively for *PurchasingWorld* by Data Resources Inc. (DRI) reveals.

The problem is a greater-than-normal amount of variation—as individual sectors and product lines move all over the lot. For example, while overall industrial producer price averages could well show a small decline this year, many individual items will actually be posting modest gains.

This "mixed" pattern is not likely to change over the next few years. Note from the detailed table alongside that prices by the third quarter of 1987 will show changes varying from a 5% decline in middle distillates to an 8% increase in copper. And the same widely dispersed price pattern is likely to be repeated in 1988.

Here's what PMs can expect in key industrial procurement sectors:

- **Crude oil:** Stronger economic growth in 1987 and early 1988 should boost petroleum consumption and combine with some fuel switching in favor of oil to strengthen oil markets by the second half of 1988. The average refiner's acquisition price for foreign crude will rebound from a low of $15.67/bbl in the 2Q of 1987 to $18/bbl by the 4Q 1988.
- **Natural gas:** To maintain market share, the industry will be forced to orchestrate significant reductions in price. Producer quotes could skid 24% from 1Q 1986 to the 4Q 1987. A stronger economy will then ease competitive pressures and lead to a modest upturn in prices in 1988 when average quarterly advances of about 1.9% are predicted.
- **Electricity:** Declining utility construction activity and weak energy input costs will keep electricity prices extremely weak through the near term. The producer price index for electricity will post an average annual rate of decline of 0.4% over the 1986-88 period.
- **Steel:** By next year at this time, mill product lists should be up about 2.8% on average. And an additional 4.2% boost is seen for the next 12-month period. But there will be continued uneasiness in hard-hit subgroups such as oilfield products. Thus the price index for carbon oil well casing is projected to fall 13.1% this year and 4.8% in 1987 before edging up a modest 1.2% in 1988.
- **Nonferrous metals:** By 1987, metal producers will be able to take advantage of stronger end-market demand and an improved international trade position in some markets. The aggregate producer price index for primary nonprecious nonferrous metals should therefore advance at an average quarterly rate of 1.7% in 1987. But slower economic activity after that should limit the 1988 advance to only 0.7% for the entire 12-month period.
- **Industrial chemicals:** Near-term price escalation will be dominated by sharply lower hydrocarbon feedstock costs which, together with the competitive pressures from overcapacity, will lead to declines of 5.3% and 1.5% in prices for 1986 and 1987. On a more upbeat note, output will post an exceptional 4.9% average annual rate of increase over the 1986-88 period—reflecting growth in end-markets as well as the increasing use of synthetic materials in construction and other manufacturing industries.
- **Machinery and equipment:** As economic growth quickens and the flow of orders to domestic suppliers picks up, prices will increase more sharply. Producers will attempt to recover from several difficult, lean profit years. The aggregate price index for the sector should increase 3.1% in 1987 and a solid 4.3% in 1988—better than this year's 1.5% advance.
- **Construction materials:** Despite strong demand, price escalation will

be modest due to the restraining hand of lower costs. For example, the price of bituminous paving materials will drop 3.4% in 1986 and 1.6% in 1987—before moving up 3.4% in 1988 when oil prices begin to re-escalate. Similarly, Portland cement should only increase 0.1% this year and will speed up to 2.7% in both 1987 and 1988 as costs begin to climb a bit.

- **Electronic components:** A leaner and perhaps wiser industry will have the opportunity to benefit from renewed strength. Price increases are seen for both 1987 and 1988. Measured annually, the aggregate price index will rise only 1.2% this year—but will then accelerate to 2.8% and 3.4% in 1987 and 1988.
- **Industrial components:** Modest acceleration is seen for fasteners—as this year's estimated 1% decline (4Q 1985 to 4Q 1986) gives way to 6.3% and 3.8% increases in the two subsequent 12-month periods. The same is true of valves and fittings where this year's small 1% gain will grow to 3.7% and 4.4% in the two subsequent 12-month periods.
- **Transportation services:** A firming of energy prices and a generally strong economy through 1987 and 1988 will provide the impetus for a slow acceleration in prices for most transportation-related industries. Overall, look for a 1.1% average boost in 1987 and a 5% jump in 1988—increases that should more than recoup this year's expected 2.1% drop-off. **PW**

Product price trends into '88

(comparison of 3rd qtr. pricing)

Product	Percent change 86/85	87/86	88/87
Raw materials, energy			
Middle distillates	-38.5	-5.2	10.8
Industrial chemicals	- 9.3	1.1	4.1
Misc. chemicals	- 3.2	1.8	3.4
Paint materials	- 1.3	4.8	6.1
Supplies for manufacturing	0.1	3.0	4.1
Metals			
Steel mill products	- 3.7	2.8	4.2
Carbon steel strip (HR)	- 4.2	5.7	5.3
Carbon steel plates	-20.9	3.7	3.3
Foundry & forge products	1.3	3.7	4.0
Primary aluminum	3.2	6.6	2.7
Domestic copper	4.1	8.0	1.5
Lead	- 5.2	3.7	4.7
Titanium mill shapes	4.0	3.9	3.0
Components			
Pulp & paper products	- 0.5	1.8	4.1
Hardware	3.0	2.9	3.7
Misc. metal products	1.1	3.8	3.9
Integr. & meas. instruments	1.4	1.8	3.9
Electronic parts	1.4	3.0	3.3
Capacitors	- 0.6	2.8	3.9
Constr. products			
Plastic products	1.0	1.9	0.7
Concrete ingredients	1.1	3.4	3.8
Concrete products	1.0	2.1	3.6
Crude constr. products	0.4	4.8	5.3
Machinery			
Construction machinery	1.5	3.8	5.2
Pumps & compressors	0.8	3.4	3.2
Oil field and gas eqpt.	- 1.2	0.8	2.5

Source: Data Resources, Inc. Cost Forecasting Services

Econometric models

Revise forecasts—'upward,' say modelers

There's good news from the nation's big econometric forecasting models. Chase Econometric, DRI, Wharton Econometrics, and Merrill Lynch have each revised their projections to show significant improvements over forecasts made at the beginning of the year.

The new figures (detailed in *PW*'s latest semiannual rundown alongside) suggest substantially reduced inflation rates for both this year and next. Interest and unemployment rates will be slightly lower than previously anticipated.

Growth estimates also look better. While they haven't been beefed up all that much from those made at the beginning of the year, they support the belief that the economy is still in solid uptrend.

In fact, all four of the models monitored in the *PW* survey show growth acceleration in 1987—both in terms of real GNP and industrial production. That's no mean feat considering that 1987 will mark the fifth year of uninterrupted economic advance.

Why the rosier outlook now? Lower oil tags, of course, have played a major role in forcing reduction in price projections. So, too, have the relatively low wage boosts negotiated in recent labor contracts. Together those factors will probably bring the first decline in finished producer prices in over two decades.

Spokesmen for all four of these mathematically-oriented models also say they now have more confidence in their growth projections—as smaller price increases beef up real purchasing power and hence sales potential in both the consumer and producer goods sectors.

Another plus factor in the growth equation—according to these economic models—is a bigger-than-expected drop in the value of the dollar. This will begin to discourage imports and encourage exports and should increase overall domestic manufacturing activity.

Here's a closer look at what these computer-derived forecasts are suggesting:

- **Growth:** The average GNP advance seen for 1986 isn't all that much better than in 1985 (2.7% versus 2.2%). But in 1987, the combined effects of lower inflation and a weaker dollar will push gains into the 3.6% range.

As for the more volatile industrial production index, a 1.7% prediction reflects lackluster auto and machinery demand—and the huge U.S. trade imbalance. But next year, a significant 4.2% average advance is seen as the lagged impact of the weaker dollar is felt and as machinery demand turns up again.

- **Price trends:** As noted above, all key inflation yardsticks have been toned down. The best showing will be in finished producer prices where a 1% decline is expected for the current year. But even the more inclusive cost-of-living index (COLA) and GNP price deflator—both of which contain a higher percentage of services—will rise by only about 2.5% this year. Some acceleration is anticipated for 1987, but it will be modest. Look for finished producer prices, the cost-of-living, and the GNP price deflator to advance by only about 2%, 3.5%, and 3%, respectively.

Real GNP (% change)	1986	1987
DRI	3.0	3.9
Chase	2.4	2.9
Wharton	2.8	4.4
Merrill Lynch	2.6	3.1
AVERAGE	**2.7**	**3.6**
Industrial production (% change)		
DRI	1.4	4.5
Chase	2.3	4.5
Wharton	1.6	4.7
Merrill Lynch	1.5	3.2
AVERAGE	**1.7**	**4.2**
GNP price deflator (% change)		
DRI	2.0	2.3
Chase	2.9	3.3
Wharton	2.8	3.1
Merrill Lynch	2.8	3.3
AVERAGE	**2.6**	**3.0**
Finished producer prices (% change)		
DRI	−1.1	1.3
Chase	−1.5	2.0
Wharton	−0.2	1.7
Merrill Lynch	−1.6	2.6
AVERAGE	**−0.9**	**1.9**
Consumer prices (% change)		
DRI	2.2	2.8
Chase	2.3	3.7
Wharton	2.7	3.8
Merrill Lynch	1.9	3.2
AVERAGE	**2.3**	**3.4**
Prime interest rate (%)		
DRI	8.9	8.8
Chase	8.7	9.2
Wharton	8.3	8.4
Merrill Lynch	8.5	8.3
AVERAGE	**8.6**	**8.7**
Unemployment rate (%)		
DRI	6.8	6.4
Chase	6.8	6.2
Wharton	6.8	6.3
Merrill Lynch	7.0	6.8
AVERAGE	**6.9**	**6.4**

- **Interest rates:** The news is good according to the four big econometric models. Averages suggest very little change—with the prime rate continuing to hover in the relatively low 8.5-9% range—a level which is not expected to seriously impair consumer and business purchases.
- **Unemployment:** A mixed picture here. This year the low growth rates envisioned suggest little change from the relatively high 7% jobless figure of the past few quarters. But the heftier industrial output advances seen for 1987 should more than offset increases in the labor force—and bring the overall jobless average down to about 6.5%.

Lending confidence to the above forecasts is the fact that all four models agree fairly closely on where things are headed. In the case of most price forecasts, for example, only about one percentage point separates high and low estimates.

To be sure, there's a bit more variation in the more volatile industrial production series for 1987. But even the 1.5% gap between high and low estimates is relatively narrow compared to the differences of opinion prevailing in previous years.

PW

Purchasers' view

PMs turn tough in negotiations, on prices

The nation's industrial buyers essentially confirm what economists and the big econometric models have been projecting: moderate growth and relatively subdued price increases. Strong first quarter GNP performance (3.7%) buoyed everyone's spirits more than a little.

A new nationwide *Purchasing World* survey indicates that demand gains for the responding companies will average only 4.7% (that's slightly under earlier projections). The typical price advance for procurement items should run about 3.1%.

As might be expected, projected price advances are somewhat under the 3.4% average forecasted at the beginning of this year. Despite this, close to half of the PMs surveyed expect some overall price acceleration in the second half of 1986.

The reasons given for the expected price upturn: A bottoming out of oil prices and some delayed effects of the close to 30% devaluation of the dollar over the past 18 months.

On the other hand, it should be emphasized that very few of the PMs queried expect sharp acceleration in prices. Cushioning any overall price pickup is the fact that some 13% of the respondents are still hopeful of further deceleration.

Continuing price moderation is also confirmed by a recent report by the NAPM Business Survey Committee. It finds that more than three out of five PMs expect price increases into the second half of 1986 to be slight. Some 90% expect these boosts to be selective rather than across-the-board—a percentage that has been exceeded only twice in the 23-year history of the survey.

The NAPM study also bolsters projections that economic gains in the near term will be selective. Only 46% of the surveyed PMs see the second half topping the first half. These results are almost the same as those obtained from the *Purchasing World* survey.

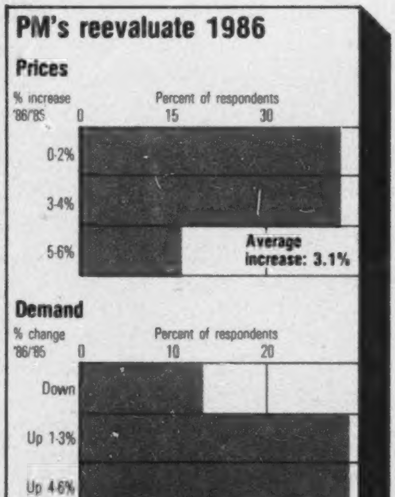
Another point regarding demand: PMs have not upgraded their own companies' demand forecasts since the beginning of the year, despite the stimulus provided by low interest rates and increased consumer purchasing power stemming from lower energy outlays.

But the current *PW* survey calling

for an average 4.7% demand gain for the year compares somewhat unfavorably with the 5.3% gain that these same firms were expecting at the beginning of the year.

One purchasing executive explains it this way: "I think we were far too optimistic in January. Only the ensuing decline in oil and interest rates is allowing us to attain our earlier projections. In short, we just lucked out."

But whether gains are under or above earlier estimates, most purchasing people agree that supplies will remain more than ample.



Source: PurchasingWorld

The survey also finds that despite continuing business gains, more PMs expect to pare their stocks in the second half (36%) than to add to them (32%). And virtually no one expects to do any major accumulation. In short, no one seems worried.

Only 20% of the survey respondents expect any leadtime stretchouts—and even this is mostly offset by the 70% who see no change and the 10% who expect improved vendor performance.

On the supply availability score, only one in ten expects possible tightness—and most of these concerns are due to fear of strikes rather than to any capacity restraints. In cases where buyers are concerned, they feel that increased imports could easily make up any temporary shortfall.

Purchasing executives are pulling out all stops to make 1986 a good purchasing year. Heading the list—and it is likely to keep vendors squirming—is the increasingly aggressive bargaining line. PMs are demanding cost justification for virtually every proposed price boost. Other tried and true methods include: 1) reducing the number of vendors to improve bargaining leverage, 2) seeking more long-term agreements with suppliers, and 3) demanding for just-in-time delivery.

"We can no longer afford the luxury of paying more than is absolutely necessary," says one Midwestern PM. "Cost efficiency is the key to survival in today's increasingly competitive markets—and what better place to start than in purchasing where each dollar saved goes directly to the bottom line." **PW**

Steel buyers face shrinking global sources

Steel purchasers could become more dependent on new worldwide suppliers in the future as present suppliers decrease capacity. By 1995, the world's major steelmaking countries—Japan, the United States, and the European Economic Community—will lose at least 80 million metric tons of steelmaking capacity, according to *Crisis and Competition: The World Steel Industry 1986-2000*, a new long-term forecast from Chase Econometrics.

John Jacobson, director of the U.S. and World Steel Service for Chase, says that the Big Three steelmaking regions will close at least 25 integrated steel works, plus several mini-mills and even some specialty steelmakers. He sees the older steel mills in America, Europe, and even Japan being pushed slowly out of production by newer, more efficient mills in South Korea and Brazil, as well as by overall productivity enhancements due to the shift to continuous casting in their own countries. In contrast to the shrinking steel capacity in the Big Three, South Korea will add 14 million metric tons, and Brazil 12 million metric tons of capacity by 1995.

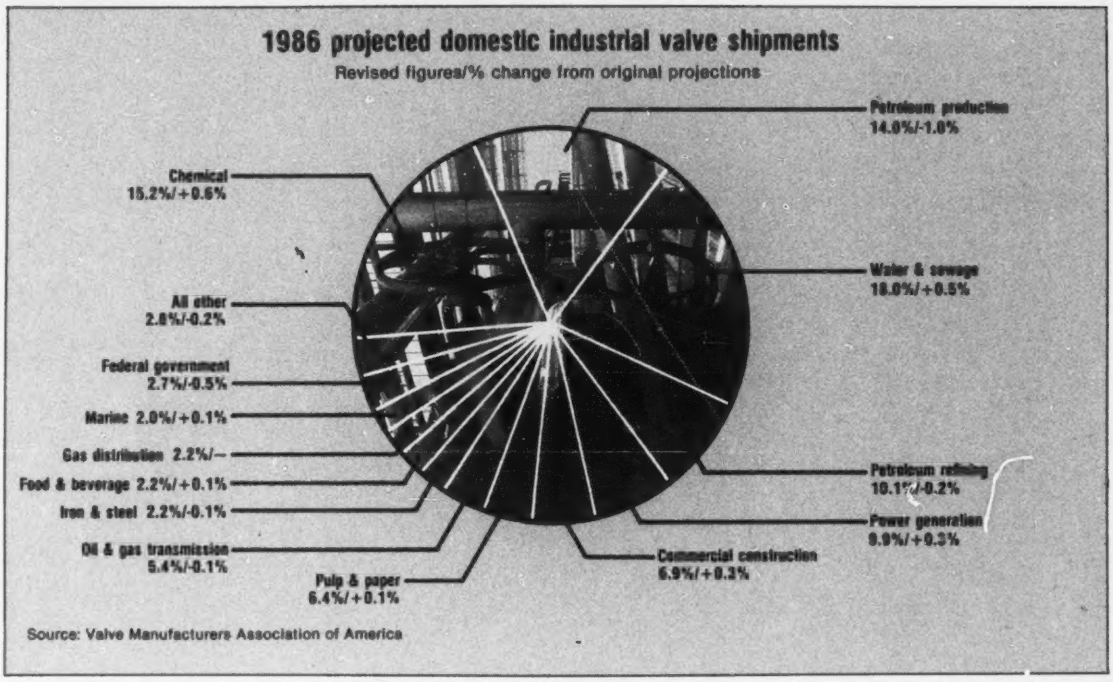
The U.S. steel industry is undergoing fundamental structural changes which take the form of management buyouts, greater employee ownership, joint ventures with foreign producers, and purchase of U.S. capacity by overseas investors. Four years of heavy financial losses have ravaged the balance sheets of major integrated steel companies and have limited their strategic options. Competition from lower cost imports and mini-mills further shrink the market share of U.S. integrated producers.

The U.S. is not the only one facing problems. Japan, once the model of steelmaking productivity, is facing maturing domestic steel markets, depressed export markets in the Middle East, and competition from South Korean exports in its regional and overseas markets.

"Rationalization of the steel industry in the Big Three, where capacity utilization has averaged less than 65% since 1980, is long overdue," says Jacobson.

Crisis and Competition is a three-volume forecast of steel production and marketing in 25 regions and countries. **Circle 166** **PW**

Imports, oil patch slump trouble valve industry



1986 projected domestic industrial valve shipments

Revised figures/% change from original projections

Source: Valve Manufacturers Association of America

Valve manufacturers expect a drop in petroleum industry demand to be offset by other key markets. Percentage breakdown figures showing end user markets issued at the end of 1985 were revised to reflect current market conditions.

With one of its major markets in trouble, the U.S. valve industry is looking to other market segments to take up the slack. Overcapacity is still a nagging problem.

Thomas F. Dillon, C.P.M., senior editor

Despite some problems, U.S. valve manufacturing executives aren't weeping about business prospects this year.

Dr. Malcolm E. O'Hagan, vice president of the Valve Manufacturers Association of America (VMA), informally polled the attendees of a recent meeting of the Valve Manufacturers Association of America on their outlook for the balance of 1986. More than half of the CEOs said they expect business to improve this year, 30% said it would remain the same, and about 20% said it would worsen.

To a casual industry observer, these results might seem surprising. One of the industry's major customers, the oil and gas industry, is severely curtailing production and is cutting back expansion plans. Luckily, the valve market is varied—when one is down, others usually take up the slack.

The same low petroleum prices that have curtailed production in the oil patch have translated into cheaper feedstock for the chemical industry, another major user of industrial valves.

As interest rates decline, the demand for housing is transformed into suburban neighborhoods. Water and sewer lines and treatment plants must be constructed—and sewage and water treatment businesses are the valve industry's biggest customers.

For these and other reasons, the VMA recently revised its forecast for 1986. Instead of the slight decrease in dollar value of shipments predicted just a few months ago, the VMA now projects a 1% increase for 1986.

Yet the industry is not without its problems. It is currently operating at 62% of capacity, approximately the same as in the past few years but far below the rate of the late 1970s and early 1980s. In contrast, total U.S. industry is now running at about 79% of capacity.

Dan DeSantis, president of Jamesbury Corp., Worcester, MA, says that until capital equipment expenditures increase, the valve industry will not change materially. He is hopeful that the current low interest and inflation rates, and low energy costs will lead to increased capital expenditures in such important valve markets as chemicals, petrochemicals, pulp and paper, and power.

Meanwhile, the industry is undergoing a wave of mergers, consolidations, buy-outs, and joint ventures all in an effort to become leaner and to sop up excess capacity. In the past 18 months, says Edwin J. Bonner, chairman of the VMA and president of Leslie Co., Parsippany, NJ, over 40% of the VMA member companies have changed hands. Many companies are establishing overseas facilities, partly to cut costs and partly to comply with domestic content laws being enforced in overseas markets.

The industry is also facing increasingly tough import competition. In 1985, the value of imports increased 30% to $758.7 million while exports declined 10% to $640.4 million. This was the first time since the VMA began keeping such records that the U.S. was a net importer of valves.

The leading sources of imports were Japan, West Germany, Canada, and Taiwan—all except Canada increased their valve exports to this country in 1985. Imports from Japan (the major overseas source) were up almost 38% over 1984, reaching $330 million. Imports from Taiwan were up 38% to almost $110 million while Korea posted a 66% increase. West Germany experienced a 17% boost. Canadian imports dropped 12% to about $160 million.

On the export side, shipments to Canada increased 11% in 1985 (to $40 million) over 1984. Shipments to Japan rose 13% (to $70 million),

Photo courtesy of Crane Valve Division

Petroleum production is still a major market for U.S. valve manufacturers. The flow of fluids at temperatures as high as 1100 F is controlled by Crane's steel valves used in this refinery.

Valve industry trends

New materials, new manufacturing methods, and the modification of standard valves for special applications are changing the industry. Here are some examples:

- In an effort to cut costs, says Lew Iadorola, marketing manager at Worcester Controls, customers have increased the demand for butterfly valves. The butterfly valve provides a lot of flow capacity for its size and weight and is therefore cost-effective. It does have sealing and pressure-temperature limitations, but the majority of valves that are purchased are for relatively low pressure, low temperature applications that can be handled by butterfly valves. **Circle 145**
- Worcester Controls has also developed a line of High-per Mizer ball valves, available in both resilient and metal seated versions so the seating materials can be matched to service requirements. The metal-seated version offers superior abrasion resistance and the ability to handle high temperature and pressure applications. The resilient seated version offers lower operating torques, a high degree of corrosion compatibility, and ability to offer bubble-tight sealing at elevated pressures. The resilient sealing, called High-per Fill, is a blend of poly ether ether ketone, glass, and graphite fibers. **Circle 146**
- Automatic Valve Corp., Novi, MI, recently introduced a series of four-way pneumatic valves molded from VALOX engineering thermoplastic. The material provides high flow capacity, corrosion resistance, with half the weight of a metal valve. Unlike conventional valves that require the machining of separate parts, the components of the new valve are injection molded, improving product consistency and reducing costs by eliminating secondary operations. **Circle 150**
- Powdered metal technology is now being used by several major valve manufacturers. The major advantage to using powdered metal is cost reduction through the elimination of machining operations and waste material.
- DynaQuip Controls Inc., a St. Louis ball valve manufacturer, recently modified a valve for a manufacturer of commercial french fryers, the kind used in food chains. These fryers cannot use valves made of copper alloy because of food contamination so they usually use steel ball valves which are designed for high pressure applications—they greatly exceed the requirements for the fryers. Dynaquip designed a valve made of cast iron instead of steel and customized it in other ways to fit the application exactly. **Circle 161**

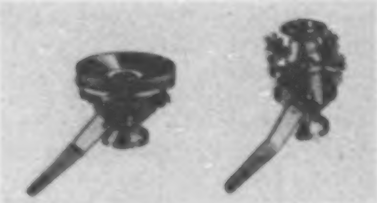
and exports to Switzerland rose 44% (to $26 million). At the same time, other markets eroded: Mexico (down 7%), United Kingdom (down 4%), Saudi Arabia (down 39%), and South Korea (down 40%). Because of the recent decline in the value of the dollar, the VMA is predicting a 4% drop in imports this year. The weaker dollar should also make U.S. valves more competitive in the world market. Import competition has caused some U.S. manufacturers to abandon lower-priced, commodity-type valves in favor of the higher-priced specialty valves.

Ray Baker, president of Crane Valve Division, the largest valve manufacturer in the U.S., sees today's market as "one of the great opportunities for the U.S. valve industry" because it is forcing companies to lower costs, improve operations, and provide better customer service. Baker says that U.S. valve makers have been lax about providing service in particulars such as responding to inquiries, providing products off-the-shelf, and making on-time deliveries. This is where U.S. manufacturers can combat imports, he explains. Watch for more manufacturing automation, quality control programs, and safety programs in the industry to improve customer service.

Service is especially important today because many customers are also short of work. When they get jobs they want to complete it as quickly as possible—they cannot afford to shop around the world to trim the last nickel off the price.

The U.S. valve industry is having its problems. But today it is a much leaner, more cost and quality conscious industry that is rededicating itself to improving service to its customers. Who will survive? Lew Iadarola of Worcester Controls answers that question this way: "It is going to be a tough year competitively, but the companies that have always been able to survive in this kind of environment will persevere and grow." Ray Baker of Crane Valve Div. may just be right when he calls today's market "one of the great opportunities for the U.S. valve industry." **PW**

Check it out



Designed for use in particulate asceptic packaging lines, these flush bottom and two-way ball valves feature steam tracing around the seal areas. Fully-encapsulated seals provide reduction in product entrapment, while full flow ports eliminate product flow restrictions. The valves can be used for a variety of applications, ranging from yogurt processing to asceptic-packaged chili. *Lee Productions, Inc.* **Circle 131**

When placed in a manifold block, this valve operates as an angle check valve with good leakage control. When combined with any simple bleed valving for pilot control, the side-ported valve provides check valve functions and can permit full flow in the reverse direction. Applications include regeneration circuits, clamping circuits, pump unloading, and on-off control applications. By varying the bleed valving and line connections, a wide variety of system applications is possible where it is desirable to control large amounts of energy with small amounts of input. *Kepner Products Co.* **Circle 132**

This line of steam pressure regulating valves was developed for reduction, backpressure, and differential pressure regulation. The valves feature piston cylinders and piston rings coated with a super-hard, low-friction material. *Union Flonetics.* **Circle 135**

Type "A" air-operated pinch valves open and close by air or hydraulic pressure applied on a resilient seat within the valve housing. Featuring a built-in actuator, the valves will close drop tight on entrapped solids. They provide throttling and control capabilities for slurries, corrosive materials, and pneumatic conveying systems. *Red Valve Co.* **Circle 133**

This bronze, two-piece safety exhaust valve for compressed air service features DynaQuip's "Zero Mechanical State" venting action. Residual air is vented through a bleed hole when the valve is turned off. This automatically depressurizes any air-driven equipment attached to the valves and insures a safe environment for service and repair operations. *DynaQuip Controls.* **Circle 144**

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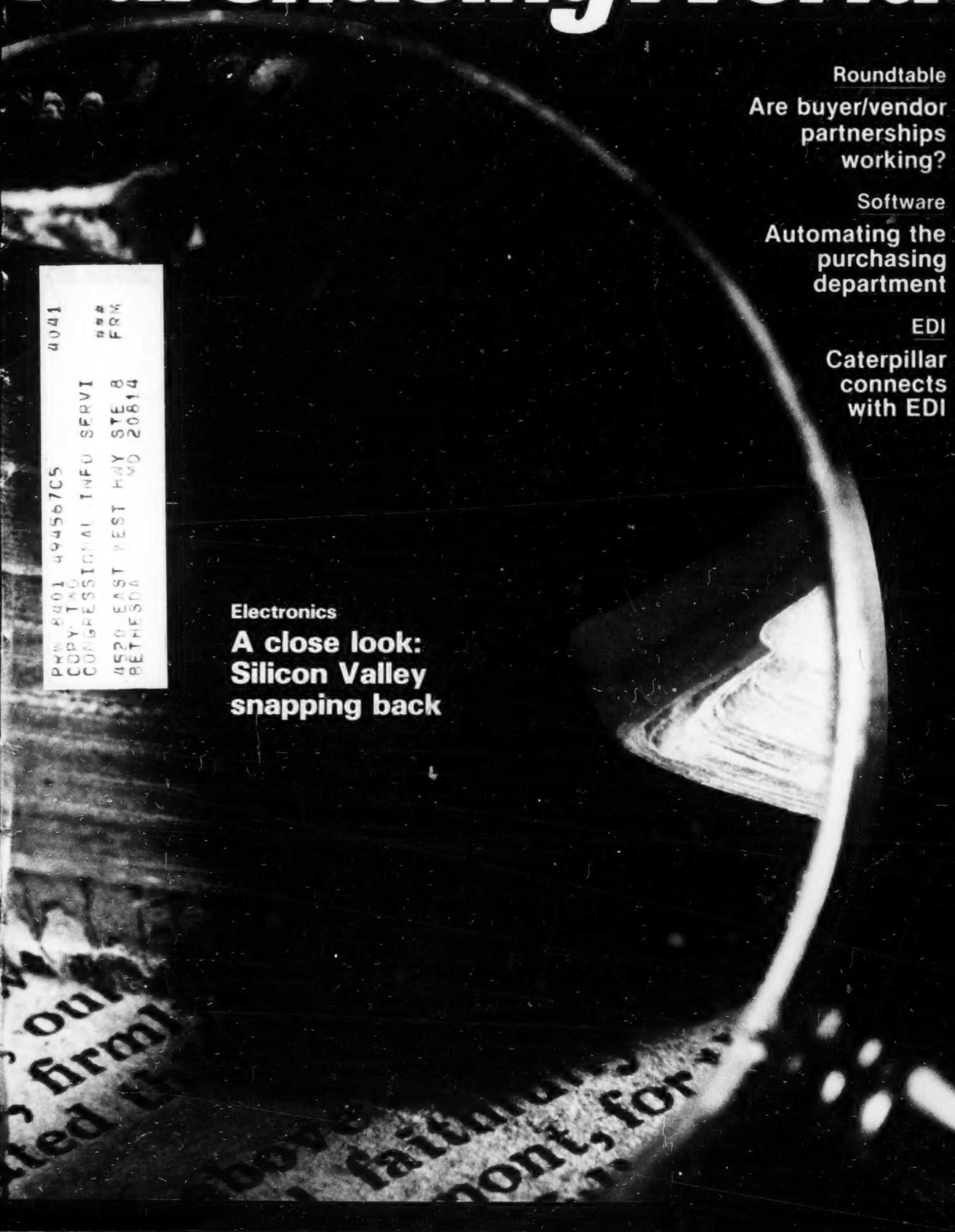

Roundtable

Are buyer/vendor partnerships working?

Software

Automating the purchasing department

EDI

Caterpillar connects with EDI

Electronics

A close look: Silicon Valley snapping back

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August 1986 Vol. 30 No. 8

Special Report: Electronics

40 Silicon Valley snapping back
After a devastating recession in the industry caused by soft demand and excessive inventories, the basic electronics industry is making a comeback. Demand projections for computers and communications equipment augur well for the long-term outlook for the entire industry. Look for prices on hardware to come down and software to go up.

38

Features

36 The many uses of the quotations file
Jeff Pinkerton takes a close look at how you can use a quotations file in your database for better planning, easier access, finer analysis, and better management control.

38 The role of purchasing in construction contracts
The escalation of competitively bid prices caused by design and engineering changes is the biggest headache in these construction contracts. But using appropriate purchasing principles can save a great deal of grief.

45 Lists are only a starting point
PW's latest Survey of the Month shows that buyers are going all out to keep vendors on the defensive. While some prices are expected to rise, shading and discounts in other areas will more than offset these advances.

46 How to choose an application software package
Software for purchasing ranges from very complex to relatively simple packages. But most of them don't work well with an MRP system nor do they adapt easily to purchasing department practices. Here are some tips.

46

62 Caterpillar connects with EDI
Caterpillar Inc. has become the first non-automotive company to put the Automotive Industry Action Group's EDI format in practice when it went on-line this year with its EDI program. It wasn't an easy task, but the benefits were well worth the effort.

114 Nominate your star buyers for *PW*'s Buyer of the Year award. This is a chance to reward outstanding achievement in your department. Here are the details.

Departments

4 PW Pointers
6 Editorial
8 PW Predicts
17 Datatrak
30 Law
34 PW Transportation Report
38 Negotiations
54 PW Office '86
92 Products
104 Sample Pak
110 Catalogs
112 Literature
113 Ad Index and Classified

Cover photo courtesy of IBM—IBM is counting on its new megabit chip to be one of the more important technical enhancements to its 3090-series to make it the high-end growth system for the decade (see pg. 43).

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PW PREDICTS

Robert S. Reichard, executive editor

Inflation isn't going anywhere

There's little on the near-term horizon to suggest any significant uptick in the overall inflation rate.

That's not to say that the negative readings of some recent months will continue—the leveling off in oil would clearly seem to rule out that kind of scenario. On the other hand, neither cost or demand pressures seems strong enough to set off a sustained rally.

The labor cost picture bears this out. Some key industrial unions have recently had to settle for relatively small pay hikes. And in other areas—such as steel, copper, and aluminum—wages have actually been cut.

This basic pattern is not likely to change much in 1987—as international competitive pressures continue to squeeze many of the nation's major industries in white and blue collar areas. A new Conference Board survey estimates that office worker raises will average 5.5% next year.

Interest rates also continue to head lower. A recent *Wall Street Journal* study of 30 top economists puts 3-month Treasury bills and 30-year Treasury bonds at only 6.01% and 7.41% by yearend.

These low rates aren't all that hard to explain. Business analysts are quick to point out that even with recent declines, rates adjusted for inflation are still high compared with historical experience.

The raw material segment of the cost equation remains under control. ***PW***'s spot industrial commodity index continues to run more than 10% under year-earlier levels.

Don't expect much change either. Oil prices show few signs of sustained near-term turnaround and most metals, chemicals, and plastics remain in the doldrums.

Most Free World economies show few signs of regaining the vigor they displayed in earlier decades. At the same time, many Third World commodity producers have opted to boost output to earn badly needed foreign exchange. Result: a substantial gap between raw material supply and demand.

Wharton Econometric's latest computer readout shows the industrial producer price index rising at these subdued annual rates over the next 12 months: 3Q 1986 (1%), 4Q 1986 (1.6%), 1Q 1987 (1.7%), and 2Q 1987 (1.9%).

Even the capital goods segment of this yardstick is encouraging—Wharton analysts peg the increases at 2.5% over the next four quarters.

Natural gas

The price of natural gas will almost certainly decline further over the next few years.

Behind the continuing fall: a hefty supply excess—a glut that could bring the wellhead price down close to \$2/mcf by 1988, 13% under this year's estimated average price. But retail tags will probably fall by only 4-5% over the same 2-year period, according to analysts at the American Gas Association (AGA).

Market balance isn't likely to be achieved anytime soon. The AGA puts the current surplus at close to 2.5 trillion cubic feet—about 14% of the industry's current potential.

There has been talk about the "supply bubble" bursting in a few years. But any return to the tightness of a few years ago seems remote because the nation has many large and diverse reserves that can be tapped.

And Canada could provide about 1.5 tcf a year, or nearly 6% of current U.S. demand. Canadian shipments in 1985 were only 935 bcf. With the new Canadian policy of encouraging exports to the U.S., this level should rise in the future.

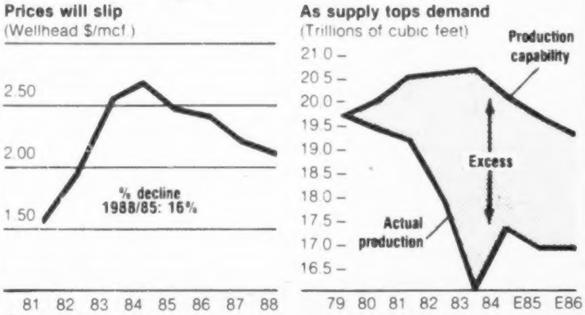
Also, demand has been hurt by the recent oil price tumble. The Department of Energy (DOE) estimates that total U.S. consumption could be off by more than 1% for 1986 as a whole.

On the other hand, the worst seems over. In fact, a turnaround may already be in the works. The DOE study, looking at quarter-by-quarter trends, sees as much as a 4-5% increase in use over the 12-month period ending next June.

The improving picture is also being helped by the changing price relationship with coal (where tags should remain relatively flat) and with electricity (where some small rate increases seem likely).

Another bullish note: Because of the encouraging price trend, the outlook for some innovative uses for natural gas has improved. The AGA sees good potential in natural gas cooling for the commercial market, gas-fired cogeneration of electricity in the commercial and industrial markets, combined-cycle power plant applications for generating electricity, and the use of gas as a vehicle fuel.

Natural Gas: more weakness ahead



Prices will slip

(Wellhead \$/mcf.)

As supply tops demand

(Trillions of cubic feet)

Source American Gas Assn

PW PREDICTS

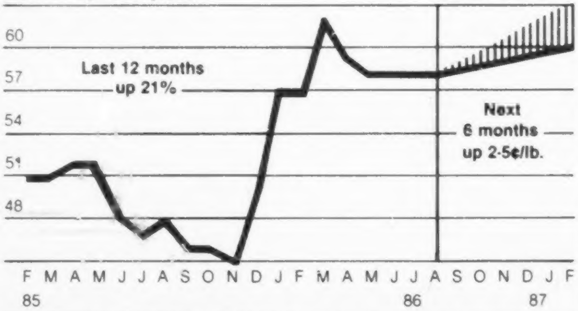
Aluminum

CURRENT SITUATION: Demand has slowed a bit after considerable hedge buying earlier this year. The summer lull could be a factor. Prices have stabilized at considerably higher levels than those of last fall. Ingot continues to move in the upper 50s and can stock has recently advanced about 7%. While there still are some weak spots—minor discounting in mill products and trims—moves have been relatively minor. **Industry analysts put overall aluminum tags (ingot plus fabricated products) up 10-15%** *vis a vis* early 1986 levels.

DEMAND: Look for a good year. The domestic industry should ship close to 16 billion lb—well above the 15.3 billion lb moved in 1985. Free World consumption will be up 5%, while domestic advances will be in foil, rod, bar, and wire. Packaging will account for more than 25% of total use. **The long-term prognosis is also bullish**—with average annual gains of near 3.5% seen through 1990. Increased use of the metal in autos will be a big factor.

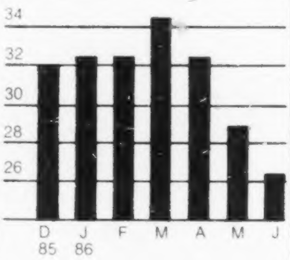
SUPPLY: Strike threats are over so there should be ample supply—despite reductions in global stocks of primary metal (down to 1.7 million tons at last report). **Free World operating rates (85%), projected capacity increases, and recycling—all indicate a no-sweat situation.** The only real concern on availability expressed by buyers is for domestic can sheet—prompting a push for longer-term contracts.

PRICE OUTLOOK: The end of labor strife could limit near-term advances. Market ingot tags could easily slip a bit in the next few months before bouncing back to near 60¢/lb by early 1987—a far cry from the 75¢/lb levels of early 1984. Low Third World production costs and fairly stable energy costs should also put a cap on prices. **Look for ingot and fabricated price increases of about 3% for 1987—in line with the overall inflation rate.**



Aluminum ingot

(Cents/lb.) **(Market price)**



Low-density polyethylene

(Liner grade-market price ¢/lb.)

Polyethylene

Slippage is reported everywhere. The latest price readings with percent decline from early 1986 levels are as follows: liner grade LDPE, 26-27¢/lb (down 18%); butane-type LLDPE, 25-26¢/lb (down 16%); blow molding HDPE, 28-30¢/lb (down 12%); injection molding HDPE 25-27¢/lb, (down 13%). Demand, however, remains quite strong with these percentage increases over last year's levels currently anticipated for 1986 as a whole: LDPE (3%) and HDPE (5%). And next year looks even better—with gains estimated in the 5-6% range for both LDPE and HDPE.

Ethylene

Demand remains quite brisk—with year-to-date running in the 7-8% range. Nevertheless, recent attempts to boost prices have been unsuccessful—as contract quotes remain in the 14-14.5¢/lb range (off 4¢/lb from levels earlier this year). Spot sales are said to be going for as low as 13¢/lb. Nor is any near-term boost likely as feedstock costs remain weak (ethane is currently down near 5.5¢/lb—off 3/4¢/lb from first quarter levels). Elsewhere on the petrochemical scene, butadiene makers also see continued easiness—and even further erosion from recent 13-14¢/lb contract levels.

Steel

Fears of major supply disruptions exist as mills ink new pacts or extend current contracts while negotiations continue. Prices, in the meantime, have turned easier—with a recent 3% boost postponed. Some erosion of an earlier 8% increase is also reported. Demand hasn't been all that robust either as earlier hedge orders are worked off. In any event, third quarter domestic shipments will probably be down as much as two million tons (to nearly 17 million)—with totals for the year expected to reach only 71 million, around 2 million tons under last year's levels.

Electronic equipment

Relatively slow overall growth is seen for the current year—only about 3.5% in real or physical terms, according to Henderson Ventures. That's well under the big 12% gain of 1984 and even under last year's disappointing 5% advance. Nor is next year going to be all that sensational—with only about a 6.5% increase anticipated. The big electronics consulting firm also breaks down projections into major markets. 1986's current dollar gains (as opposed to constant dollar or real gains) follow: communications (7%), computer and office (6.2%), industrial and instrument (6.2%), military (8.2%), and consumer (3%).

Imported crude oil

($/barrel)

1985	1Q	27.26	1986	1Q	19.60
1985	2Q	27.50	1986	2Q	13.00
1985	3Q	26.56	1986	3Q	12.00
1985	4Q	26.84			

Petroleum

Don't expect any significant bounceback in crude oil. Indeed, tags could well edge lower over the next few months—testing the $10/barrel barrier—as OPEC production rises to more than 19 million barrels/day. This, in turn, should put new downward pressure on refined products—with gasoline holding under $1/gallon through the end of the summer—and with perhaps even some drops after that as demand begins to tail off. True, some recovery is likely by early 1987. But even then it's highly unlikely that crude will move over $12/barrel—as the world remains awash in a sea of oil.

Computer chips

Sales have slowed after an early 1986 rally. Result: Prices are again beginning to drop—with price tags on some key memory devices falling by at least 10% over the past month or so. Especially good buys are reported on 256K random access memories. Another sign of lower prices ahead: Intel is promising to cut quotes on its million-bit EPROM to $22 by the middle of next year—a hefty 63% drop from the current $60 quote.

Copper

Strike settlements without any appreciable loss of metal just about rules out any sustained rally. Seasonal factors could also be a drag (third quarter consumption is usually down 200,000 tons *vis a vis* other quarters). In any case, there's little indication of any supply problems—with 1986 Free World consumption expected to exceed demand slightly. And further excesses are expected for 1987-88. As such, prices should remain under pressure with little chance of the metal breaking through the 70¢/lb barrier. Substitution (by fiber optics in the telecommunications area and by aluminum in the auto market) isn't calculated to strengthen markets, either.

Personal computers

Prices are nosediving again—with unofficial cuts by IBM knocking as much as 20-25% off some PCs. Example: Some stores now sell the basic model with a monochrome monitor for only $1,495, some $500 under

Paper and paper products

CURRENT SITUATION: Markets are more buoyant—demand is running 4% ahead of last year for board products and 1% ahead in paper. The gain for corrugated boxes (shipment basis) is 5% to date. **Prices are moving up.** A $320/ton list for linerboard has been posted—though it may take a few months for it to become fully effective. Uncoated white papers are firming, too.

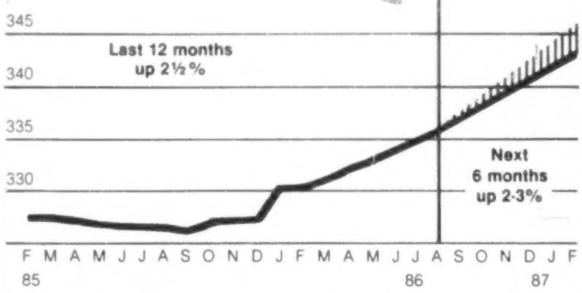
DEMAND: Increases will continue to yearend because of increased consumption and the weak U.S. dollar which is increasing exports and reducing imports. **Best bet: an overall paper and paperboard consumption gain of 1.5-2%, with production up by 3%** (to over 69 million tons), as exports advance 10% and imports fall 5%. **Production gains will be uneven.**

SUPPLY: Operating rates show improved market balance. They are currently near 93% (FRB basis)—up from 90% a year ago. **There should be ample supply**—the preferred rate is 97%. These utilization rates show an uneven pattern: unbleached kraft linerboard (91%), solid bleached board (89%), recycled paperboard (87%), uncoated groundwood (94%), uncoated free sheet (93%), and coated papers (87%). **New capacity will add to supply—one estimate calls for an increase of 2% this year and 2.5% in 1987.**

PRICE OUTLOOK: Better supply-demand balance—helped by a reduced paper and paperboard trade deficit—points to continued increases—with another 2-3% added onto overall averages by yearend or early 1987, when linerboard should be $320/ton. This should put pressure on corrugated boxes—though percentage advances in this sector should be under those for linerboard. **1987 will be similar—add 2% onto overall paper and board tags.**

Paper & Products

(Index: 1967 = 100)



PW PREDICTS

R&D spending

Figure on a big jump in research and development spending this year. If a new McGraw-Hill survey is correct, the nation's industries will shell out a whopping $88.4 billion in 1986—up 10.9% from last year.

Actually this is a continuation of a long-term trend—gains have averaged in the double-digit range for nearly a decade now. And preliminary indications point to another 12% rise by 1988.

Another plus is that most of the current outlays represent real gains. Subtract a relatively small 2.5% inflation factor from the 1986 estimate and you end up with a solid 8.5% advance. That's a far cry from the 1964-78 period when real gains ran under 1% a year.

Why the boom? A good portion can be attributed to a change in attitude on the part of America's corporate leaders. Faced with increasing world competition, they are now ready to do battle by coming up with the improved products to compete in both domestic and offshore markets.

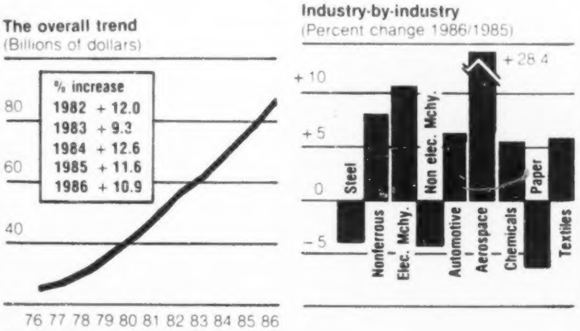
And it shows up in the percentage of the sales dollar now earmarked for R&D. This year, the share is 3.5%—up substantially from the 2.1% low in 1978.

There has also been a shift in emphasis away from new hardware (capital spending) to new processes and products. Note that where R&D amounted to only 15% of capital spending in 1979, it now accounts for 23%.

The gains projected for the current year are also somewhat uneven. While aerospace, bolstered by continuing government support, will register a 28.4% gain in 1986, a few industries are actually pulling in their horns —notably steel, nonelectric machinery, and paper—where declines of 4.3%, 4.8%, and 5.7% are projected.

But even here there's hope for the future. All three of the above industries plan to turn on the R&D spending spigot before too long—with outlays expected to rise as follows some two years hence: steel (4.7%), nonelectric machinery (3.9), and paper (7.0%).

No stinting on R&D



Source: McGraw Hill

the official $1,995 list. The competition isn't taking this lying down, either. Tandem, for example, has entered the IBM compatible field with prices as low as $1,155. Further reductions on existing models at the high end IBM AT and low end of the line have been announced.

Zinc

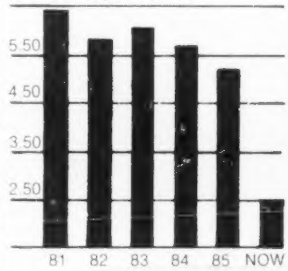
The plating and alloying metal has taken off and now commands well over 40¢/lb—close to 10¢/lb above levels prevailing late last year. Behind the runup: strikes, mine shutdowns, and relatively low producer inventories. Also indicative of tightness: Free World mine output was off 9.7% during the first four months of 1986—at a time when consumption was rising 3%. Then, too, third quarter demand has been running better than expected. On the other hand, there's some feeling that the runup has been overdone—and that the drop-off into the under 30s range is a strong possibility by late fall.

Lead

Prices seem to be stabilizing in the low 20s—well above levels prevailing in February and March when the heavy metal was commanding only 18¢/lb. Behind the advance: strikes and low stocks. U.S. inventories are off close to 40,000 tons over the past three months. One potential cap on prices: Higher quotes could mean some additional output from secondary producers. If this happens, look for backing and filling in the current price range through Fall. Beyond that, some easing is possible. But given lower global stocks, any return to last year's lows seems highly unlikely.

Tin prices

(N.Y. dealer price $1 lb.)



Tin

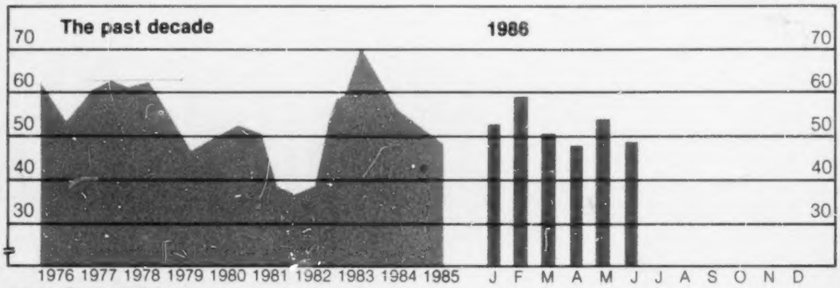
The metal which has lost more than half its value since last autumn—and is currently quoted at $2.50/lb—could well drop further (to $2.00/lb) within the next 6-12 months. Behind the continuing slide: 1) failure of producers to cut production enough to bring supplies back into balance with demand and 2) likely sales by banks and brokers who are anxious to unload their heavy (40,000 ton) holdings. Demand is expected to remain weak—with U.S. usage this year put at only 52,000 tons, more than 5,000 tons below the high recorded back in 1984.

PW Predicts keeps you ahead on key issues in buying

BUSINESS DATATRAK

NAPM business barometer

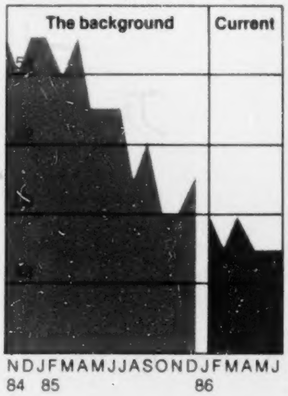
Based on five indicators (employment, inventories, new orders, production, vendor performance)



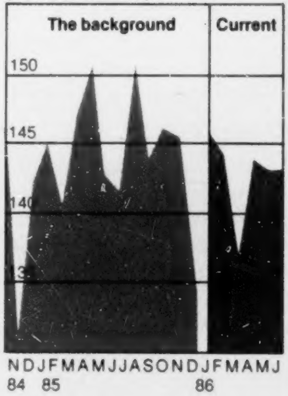
Source: Commerce Dept.

Leading indicators

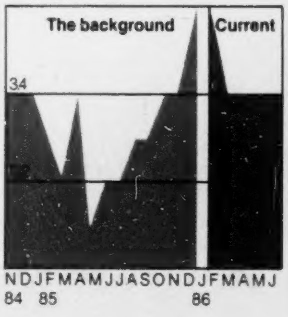
1. Stock-sales ratio
(purchased material durables)



2. Industrial distributor sales
(index: 1967 = 100)



3. Factory overtime
(hours)



KEY ECONOMIC TRENDS

Playing it close to the vest is still best

It is becoming increasingly difficult to make a case for any significant near-term advance in overall growth rates.

While the economy is still moving ahead and businessmen remain quite confident, there seem to be too many soft spots to permit the 4%+ annual rates of gain for the second half that many economists had been betting on just a few months ago.

Near-term factors calculated to keep any gains over the next few quarters to very modest proportions include:

- **Continuing close-to-the-vest inventory policies:** The impetus is coming from short leadtimes, ample availability, and sales uncertainties. Note the continuing downturn in stock-sales ratios (see chart). While obviously healthy for the long pull (by ruling out excesses), it does inhibit current production.
- **Flat capital spending:** This reflects low factory operating rates and uncertainty over tax reform. As of now, plant and equipment outlays will be hard pressed to equal 1985 levels in physical or real terms.
- **Rising home costs:** The housing boom may be about to level off as mortgage rates bottom out and higher home asking prices reduce the number of potential buyers who can afford these big-ticket items.
- **A still-huge trade deficit:** The gap has begun to stabilize, but at very high levels—certainly high enough to inhibit domestic production of cars, steel, machinery, and a host of other major product lines.

Factory managers seem to be recognizing all these restraints, and are not really preparing for any big production gains. This is readily apparent from industrial distributor sales (consisting primarily of MRO items which tend to lead industrial production by a few months). Figures here are currently running a bit behind last year—distributors say to expect the same kind of pattern for August and September.

Factory overtime is yet another indicator that there is little pressure to increase production. Latest readings here are under late 1985-early 1986 highs.

But perhaps the most disappointing development in recent months has been the lull in factory orders. They have been relatively stable now since the end of the first quarter.

This lack of buoyancy also shows up in the N.A.P.M. Business Barometer (see chart). It is down in the neutral "50" zone (49.6 specifically)—signifying that there probably won't be a real push in overall activity during the next few months.

Given all of the above, some of the pollyanna-ish forecasts made a few months ago now look way out of line. Best bet: production gains of only 2-2.5% at annual rate for the rest of the year—enough to keep GNP in uptrend, but little more than that.

On the other hand, the predictions into 1987 still have to be regarded as bullish. Low inventories will prevent any major stock imbalances from developing. And, by then, the delayed effects of a weakening dollar should be felt in the form of falling imports and rising exports. This will almost certainly have positive impact on domestic production.

Accept the above assumptions and *PW*'s preliminary forecasts for 1987 shape up like this: GNP—up 3-3.5%, and industrial production—up 4-4.5%.

Big guys are still optimistic

The economy may not be growing all that fast these days. But the majority of businessmen remain quite optimistic.

A new nationwide Dun & Bradstreet survey finds that 73% of the more than 1,400 queried executives expect 3Q sales to top year-ago levels. The number far outweighs the 7% who see declines (20% anticipate no change).

A study by the Conference Board tells much the same story. The group's measure of Business Confidence is put at 61—relatively high and unchanged from readings reported three months ago.

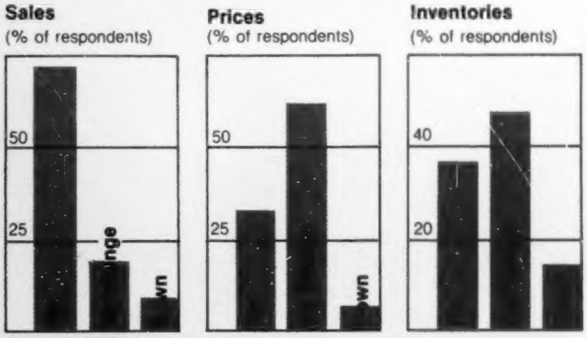
The D&B survey also provides some helpful hints on where other key economic indicators may be heading—with these key findings reported:

- **Prices:** Upward pressures may actually be weaker in the current quarter than in the April-June period. Only 31% of queried manufacturers now see increases *vis a vis* a year ago—just under the 35% who anticipated year-to-year increases three months ago when a similar question was asked.
- **Inventories:** Any buildup will be quite modest. The 36% of respondents who anticipate year-to-year buildup in the third quarter offset the 48% who see no change and 16% who are actually planning on drawdowns.
- **New orders:** Some improvement is noted here. Thus the third quarter finding—73% up and only 4% down from last year—would seem to assure a continuing near-term production.

The Conference Board survey adds some additional upbeat information on capital spending. It finds that businessmen are not about to pull back on the reins. In any event, about 70% of queried firms report no change since the beginning of the year—with the remaining 30% about equally divided between those raising and those lowering their spending sights.

How businessmen view the 3rd quarter

(Compared to year earlier)

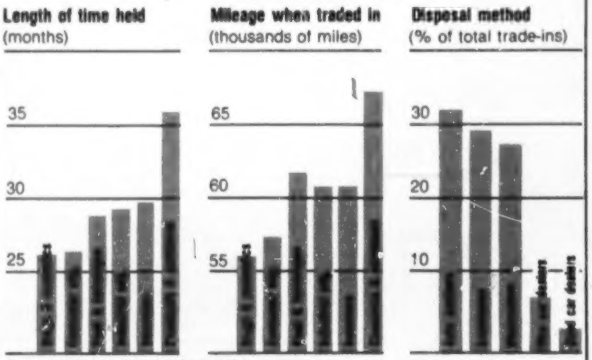


Source: Dun & Bradstreet

Fleet cars going further, longer

The typical fleet car is getting plenty of use these days. According to a recent survey by the National Association of Fleet Administrators (NAFA), the average vehicle is being held for about 2.5 years and is being driven 61,029 miles.

Fleet car strategy: 3 views



Source: National Assn. of Fleet Administrators
(Based on survey of 221 commercial fleets)

Zero in on certain industries and the figures are even bigger. Thus the fleets of chemical and petroleum companies are being held three years and are driven more than 67,000 miles before being traded in (see chart). The typical government auto is held for almost 5.5 years and is driven close to 92,000 miles.

The new NAFA survey also takes a good hard look at disposal strategies. Some of the key findings:

- **Disposal condition:** Little is done to upgrade a car before selling it. The vast majority of queried fleets (85%) do not recondition cars and almost all (96%) sell cars "as is."
- **Disposal responsibility:** In the commercial fleet sphere, some 56% of the cars are sold by fleet managers—with leasing companies disposing of another 31%. Smaller percentages are sold by fleet management services (5.8%), company field offices (4%), and the vehicle operator (3.2%).
- **Disposal methods:** Some 32% of commercial fleet cars are sold at auto auctions, 29% to the em-

ployee, 28% to wholesalers, 7.5% to new car dealers, and 3.5% to used car dealers.

- **Sales price to employee:** Price is determined most often (42.2%) by use of the Automotive Market Report (AMR). Other price-determining methods (with the percent of cars shown in parentheses); NADA wholesale prices (15%), wholesale value (10%), book value (6%), market value (5.5%), Black Book value (5.5%).

CURRENT PRICES

Prices still climbing down

Add one more month to the steady string of level or lower-than-level industrial price readings.

This key index of purchasing costs is currently running more than 4% under yearend 1985 levels. That's more than 8% on an annual basis—making this the sharpest decline in this bellwether inflation yardstick since 1949.

And once again the declines over the last 30 days are pretty broadly based—with some 20 of the 50 or so regularly monitored product lines ending up in the minus column.

About the only difference this time around is the leveling off in energy prices after an eye-opening first half slide. Even in that sector there are still some significant weak spots—namely natural gas which fell 5.8% over the month.

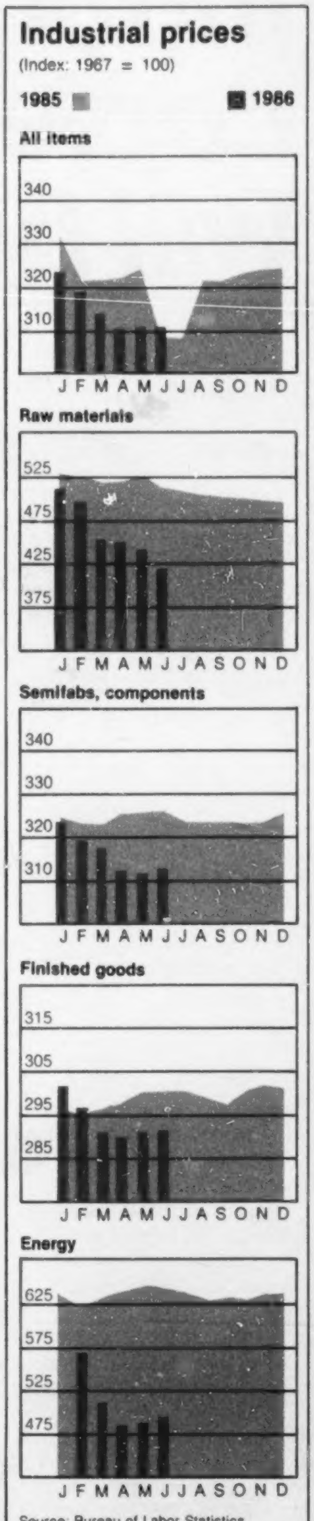
Capital equipment tags are also rather flat—rising only 0.1% over the month—as small increases in metal-cutting machine tools, mining machinery, and agricultural equipment offset continued easiness in oil and gas field equipment. Also encouraging in this sector: The overall increase over the past year comes to less than 2%.

Another surprising development: the lack of upward pressure in construction material prices—despite the continued housing boom. Indeed, averages actually fell more than 0.3% over the month, spearheaded by declines in lumber, plywood, asphalt products, gypsum products, plastic plumbing, and metal pipe fittings. Equally noteworthy here: Averages are running close to 1% under year-earlier levels.

Some of the other key areas, meantime, turned in mixed performances. Thus while inorganic chemicals stabilized (pri-

This month's breakdown

	Latest level (June)	% change from: Month ago	Year ago
Bearings	356.0	0.1	1.0
Bolts, nuts, etc	277.2	−0.6	0.0
Chemicals, inorganic	296.3	0.0	−0.9
Chemicals, organic	322.0	−1.6	−10.0
Concrete products	325.4	−0.2	1.2
Corrugated cartons	263.4	−0.1	−4.4
Cutting tools, small	291.4	−0.1	1.7
Electric lamps (bulbs)	347.1	0.3	1.1
Electronic components	201.0	0.2	1.9
Fans and blowers	367.8	1.3	2.5
Foundry and forge products	364.5	−0.1	0.2
Fuel oil (residual)	499.8	−4.5	−44.1
Furniture, commercial	315.8	−0.2	2.6
Gasoline	392.6	3.7	−33.5
Glass, flat	229.6	−0.2	2.1
Glass containers	399.6	0.0	4.7
Gypsum products	353.8	−1.8	4.6
Hand tools	383.3	0.1	2.6
Hand tools, power driven	238.9	0.9	3.6
Industrial furnaces	395.3	−0.5	2.7
Integrating and measuring instruments	235.3	0.0	1.5
Internal combustion engines	353.3	0.2	1.8
Lubricating oil	373.0	1.7	−0.2
Lumber millwork	320.6	1.2	2.8
Material handling equipment	295.9	−0.2	0.3
Metal containers	361.0	0.0	0.8
Metal mill shapes (nonferrous)	300.8	0.2	−3.6
Metal tanks	302.3	−0.4	−1.0
Motors and generators	349.6	−0.6	−0.7
Motor trucks	311.1	−0.6	6.0
Office and store equipment	154.3	0.1	−0.4
Paperboard	268.6	0.9	−1.9
Paper boxes and shipping containers	266.1	−0.1	−2.7
Paper office supplies	237.4	−0.9	0.6
Paint	281.2	0.1	1.7
Plastic resins	295.2	0.2	−3.9
Precision measuring tools	268.0	0.4	1.8
Pumps and compressors	361.1	0.4	1.3
Refractories	373.2	0.0	0.5
Rubber belts and belting	337.4	−0.2	−5.3
Scales and balances	231.3	0.1	0.8
Steel products	348.1	0.1	−4.3
Switchgear	286.7	0.2	2.3
Textiles, synthetic fibers	149.4	−0.3	−4.4
Textiles, gray fabrics	151.5	0.6	−0.1
Tires and tubes	235.3	−0.2	−0.8
Transformers and power regulators	232.6	0.0	0.0
Welding equipment	300.9	0.2	3.2
Wire and cable	206.5	−0.2	1.6



Source: Bureau of Labor Statistics

marily because of firming chloralkali tags), organics continued to slip—falling another 1.6% over the month.

Declines in petrochemical building blocks like ethylene and benzene have been even sharper.

Metal tags have also been moving in all different directions. Thus while zinc, lead, and platinum advanced, weakness developed in steel, copper, aluminum, and some minor metals such as cobalt and selenium.

On the other hand, some modest firming was noted in the paper area. Wood pulp and paperboard both moved up—with the latter expected to put some upward pressure on corrugated box prices over the next few months.

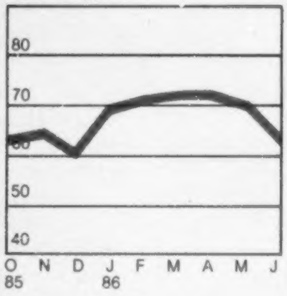
STEEL SCENE

Prices could be flattened more

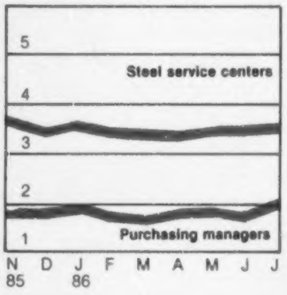
Steel markets aren't quite as buoyant as they were a few months ago.

Steel

Operating rates

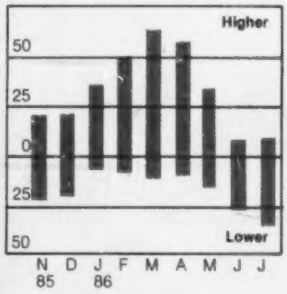


Inventories
(Months supply on hand)

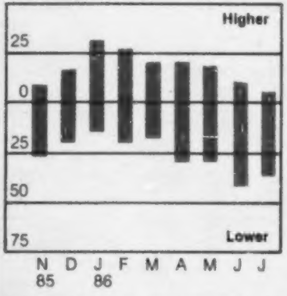


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 24%
SAME 36%
SLIGHTLY BELOW 40%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 0%
SAME 55%
5-10% BELOW 45%
10-20% BELOW 0%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

Not only are buyers whittling away at some of the early 1986 price increases on flat rolled products, but service centers are now talking about possibly lower replacement costs before the year is out.

Thirteen percent of distributors responding to the latest Steel Service Center Institute (SSCI) survey, for example, think they may be paying less than current levels for their stock replacements within six months. That compares to only 2% who felt that way just one month earlier.

Conversely, the number of service centers expecting price increases has been falling steadily. As recently as April, some 88% of these distributors were reconciled to price boosts six or so months down the pike; the comparable figure today has dropped to only 20%.

The easiness can be traced to a combination of factors including 1) less-than-anticipated overall demand, 2) some inventory paring by both buyers and service centers, and 3) more-than-ample supplies—a situation aggravated by cheap imports which continue to come in at an annual rate of more than 20 million tons.

The lackluster demand can best be appreciated by looking at the SSCI survey and a similar one conducted by the NAPM steel buyers group. The service center study reveals that more than one out of every three distributors anticipates reduced incoming orders over the next three months. That's the highest such percentage in a year and is well above the 10% and under figures noted during the first four months of the year.

One of the problems, according to SSCI president Andrew G. Sharkey, is weakness in some non-flat rolled product areas—as both defense orders and non-residential construction ease off. He adds, "there are many soft spots throughout the manufacturing industry—with very few really strong industry groups."

Buyers are equally bearish. Specifically, the 36% expecting a decline in their steel purchases over the next three months is six times as many as the small 6% who contemplate increasing their take of the metal.

Reduced buying, however, isn't entirely due to less-than-anticipated consumption. Equally important is the tendency on the part of both service centers and buyers to cut back on their steel inventories. Many PMs, for example, are determined to work off tonnages that were purchased as a strike hedge earlier this year.

This hedge may be one reason why PM stocks are again over the two-month level. And it helps explain why 42% of those surveyed now rate their holdings as "too high."

What makes this figure even more impressive is the fact that not one single buyer considers his current tonnage as being "too low." It is not surprising that nearly half plan to reduce stocks in coming months—and not a single buyer plans to accumulate stocks.

...continued

BUSINESS DATATRAK

The picture is much the same for service centers. Some 62% of these middlemen rate their stocks as being "too high"—not unexpected given three consecutive monthly rises in their stock/sales ratio.

But demand isn't the only thing putting downward pressure on prices. Excess supplies are just as significant. The AISI estimates that the current industry operating rate is only in the 60-65% range—virtually guaranteeing a continued buyers' market.

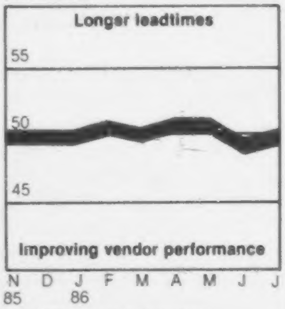
Adding to the supply glut and putting even more pressure on prices is the still-hefty inflow of cheap foreign steel. At last report some 40% of queried buyers said they were still seeing price breaks on foreign metal.

Again, this is confirmed by service centers—45% of these distributors now report lower-than-comparable U.S. prices on carbon steel imports. For stainless steel, the figure zooms up to nearly 83%—with 17% putting the break in the rather significant 11-20% range.

Monthly procurement status report

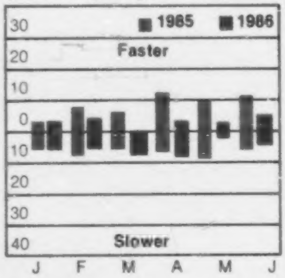
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



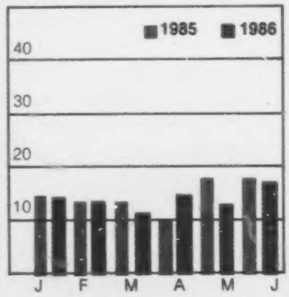
Delivery performance

(Percent reporting deliveries)



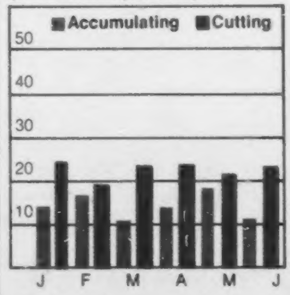
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

PROCUREMENT STATUS

Slow demand cures summertime supply blues

Normal summer supply headaches (caused by plant vacation shutdowns) are conspicuous by their absence because demand has been running under earlier expectations.

The current easy situation is illustrated by the basically flat pattern in both *PW*'s exclusive leadtime index (currently at the neutral 50). The few items that did stretch are offset by shrinkage in a few scattered products, and the N.A.P.M. speed-of-delivery index reveals that an overwhelming 89% of respondents report no change from month-earlier levels.

Purchasing managers responding to *PW*'s latest procurement status survey don't see any dramatic changes ahead. As one Midwestern buyer observes, "Demand may increase a bit with the usual fall pickup, but with operating rates stuck in the low 80% range and importers still knocking at our doors, I can't see any significant tightening in the months immediately ahead."

Latest production and capacity projections back up this thesis. The 2-2.5% increase in output (at annual rate) anticipated for the remainder of the year will be pretty closely matched by expected gains in new capacity. Don't expect any appreciable change in overall factory utilization rates.

Another sign of problem-free procurement is the latest N.A.P.M. business survey tabulation which shows that only one item, titanium dioxide, is in short supply. The point to keep in mind: Titanium has been the only item on the "tight" list for 17 consecutive months.

Also, as might be expected, nobody seems to be in a hurry to build up inventories. The latest rundown shows parers outnumbering accumulators by a 2:1 margin (24% cutting and only 12% adding).

Further confirmation comes from The Commerce Department. The stock/sales ratio for purchased durable materials (a time-tested indicator of buyer stocking strategies) is extremely low. In fact, it has actually been falling—with the latest level slipping 6% under early 1985 peaks.

Leadtimes and availability

Chicago: Regular coated paper is out to 6-8 weeks but offset types are unchanged at 4-5. Fractional stretchout in chlorine—to a week. But aluminum has moved in a week (to 12). No change in electronics: capacitors (10-19), PCBs (6-12), resistors (6-12), and ICs (16-22).

Cleveland: A few changes. On the upside (with weekly waits): glassines and greaseproof papers (4-5), coil coating paint (3) and PVC resins (1-2). But plastic packaging has slipped (to 4-5). No changes in other packaging—2-3 weeks for corrugated and folding cartons. Ditto for lumber (1-2).

Los Angeles: Specialty wires stretched out 2 weeks (to 6-8). But pumps have come in signficantly (to 8-10). Metals remain unchanged: Galvanized steel (12-14), grey iron castings (8-10), brass castings (6-8), and stainless coil (12-14). No change in fasteners (6-8 domestic) and standard bearings (20-24).

Houston: Shop fabricated carbon steel pipe has halved its lead (to only 1-3 months). More modest shrinkage (to 2-5 months) is also reported

BUSINESS DATATRAK

in alloy steel pipe. Transformers and flow metering and process instrumentation remain steady at 4-7 and 0-10 months respectively (with the upper range waits for specialized types).

Philadelphia: There has been a tendency for electric and office items to come in. Examples (with new weekly waits): Fractional horsepower motors (8-10), disk drives (8-12), printers (10-12), fuses (6-8), power supplies (12-16), and ICs (8-10). But moving out are relays (8-12), and custom transformers (14-18).

Pittsburgh: Painted seals have come in considerably (to 3-5 weeks). A shrinkage of the same magnitude is noted in manganese (to 4). But most other alloying materials remain unchanged. Elsewhere little change for plastic resins (5-6), mill quantities of copper products (6), steel strapping (2-3), and corrugated (3-4).

Leadtimes (in weeks)

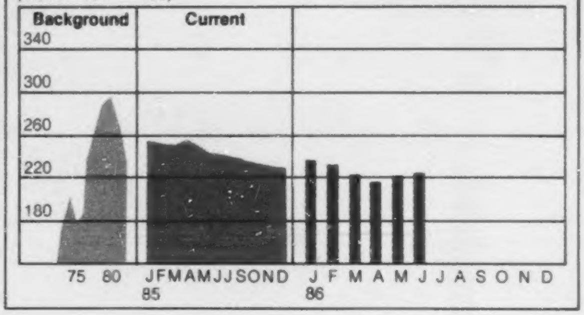
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	7½	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	2½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	4	3
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	7
Galvanized (Chgo)	7½	7½	7
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	9	9	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14½	14½	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	9	11	11
Motors (Phil)	9	10	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	1½
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	1½
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	1½	1½	3
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	3½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	12	13	11
Aluminum Plate (Chgo)	12	12	10
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	12	12	9
Brass Castings (LA)	7	7	5
Brass Rods (Chgo)	7½	7½	6½
Brass Sheet (Chgo)	5	5	4
Brass Tube (Chgo)	8	8	7
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	7	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	7	5
Fasteners, Std. (Phil)	2½	2½	1½
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	33
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	2½
Pumps (Hous)	24	24	24
Pumps (LA)	9	13	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month 224.5
Month before 221.3
Year ago 242.9

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt.	31.00	31.00	29.25
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	25.90	25.90	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.550	.585	.463
Antimony, N.Y., dealer, lb.	1.13	1.32	1.27
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.35
Brass, red, 85%, [sheet], lb.	1.28	1.32	1.29
Brass, yellow, [sheet], lb.	1.23	1.27	1.24
Cadmium, N.Y., dealer, lb.	1.05	1.19	0.80
Copper, electrolytic, wire bars, refd., lb.	.64	.68	.66
Copper sheet, over 24 in., lb.	1.37	1.41	1.38
Lead, common, N.Y., lb.	.220	.205	.185
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	239.00	244.00	308.00
Molybdenum, oxide, dealer, lb.	2.85	2.70	3.31
Nickel, cathode, dealer, lb.	1.93	1.94	2.50
Platinum, dealer, oz.	437.00	443.00	264.00
Silver, N.Y., oz.	5.08	5.47	6.05
Tin, N.Y., dealer, lb.	2.58	2.57	5.60
Zinc, Prime West, East St. Louis, lb.	.415	.380	.440
Zinc, die casting alloy, No. 3, lb.	.475	.445	.505
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.33	16.34	16.38
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	580.00	550.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	310.00	290.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.247	.237	.296
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	.940	1.045	1.040
Cotton middling, 1", N.Y., lb.	.655	.655	.595
Printcloth, 48", 80x80, N.Y., spot. yd.	.72	.70	.60
Army duck, 37", 13 oz., yd.	1.48	1.48	1.70
Blended printcloth, 64", 78x54, yd.	.765	.800	.680
20s combed yarns	1.70	2.05	1.95
Wool 64s, Staple, lb.	1.95	2.00	2.10

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	395	.455
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	90.00	N.A.
Benzene, petroleum, tanks, Houston, gal.	.75	.82	1.47
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.52	.52	.52
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.265	.290	.280
Polypropylene, homopolymer grade (market price), lb.	.34	.34	.33
Polystyrene, general purpose grade (market price) lb.	.31	.31	.35
Polyvinyl chloride, pipe grade (market price) lb.	.295	.285	.290
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.21	.21	.30
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb.	.73	.73	.69
Xylene tanks, gal.	1.36	1.36	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	322.30	328.65	326.55
Lumber 2x2 pine, mbf, cl	315.85	321.60	315.75
Plywood, plyform, ¾", msf, cl	595.95	595.65	578.60
Plywood, ⅝", msf, cl	387.55	387.55	381.60
Cement, bulk, ton, tl	65.56	66.70	64.94
Sand, ton, cl	6.62	6.60	6.25
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	47.89	47.82	47.60
Crushed stone, 1½", ton, cl	7.83	7.98	7.65
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.83	0.83	0.81
Gypsum sheathing, ½"x1"x8", msf, tl	217.57	217.52	211.94
Brick, common, per thousand, tl	184.96	184.96	181.55
Asphalt paving, AC-20	150.81	158.08	175.36
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.09	7.09	7.15
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	8.50	9.35	21.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	13.20	15.40	25.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.430	.580	.750
Gasoline, 94 oct., reg., Chi., tank car, gal.	.404	.540	.847
Heating oil, No. 2, Chi., bulk, gal.	.355	.405	.695
Heating oil, No. 2, N.Y., bulk, gal.	.348	.395	.740
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.340	.360	.690
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.260	.270	.343
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	72.00	70.00	72.00
Steel, No. 1 hvy., dlvd., Chi., ton	70.00	70.00	64.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.540	.590	.540
Copper, No. 2, East, wholesale buy, dlvd., lb.	.460	.510	.455
Brass, red, East, wholesale buy, dlvd., lb.	.500	.550	.500
Brass, yellow, East, wholesale buy, dlvd., lb.	.300	.300	.325
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.310	.290	.285
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.330	.320	.315
Zinc, old, East, wholesale-buy, dlvd., lb.	.17	.15	.14
Lead, clean solids, East, wholesale buy, dlvd., lb.	.130	.115	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	20.00	15.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	12.00	12.00	8.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.090	.095	.100
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.110	.110	.210

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Survey of the month

Lists are only a starting point

Buyers have a strong hold on prices these days. Discounts and other forms of shading are more the rule than the exception. And all indications are that this situation in likely to continue into 1987.

That's the word from the majority of industrial purchasing executives responding to a new nationwide *PurchasingWorld* survey. In a nutshell, list quotes are merely the starting point for serious negotiations these days.

Most PMs agree. The just-completed *PW* survey suggests the following developments:

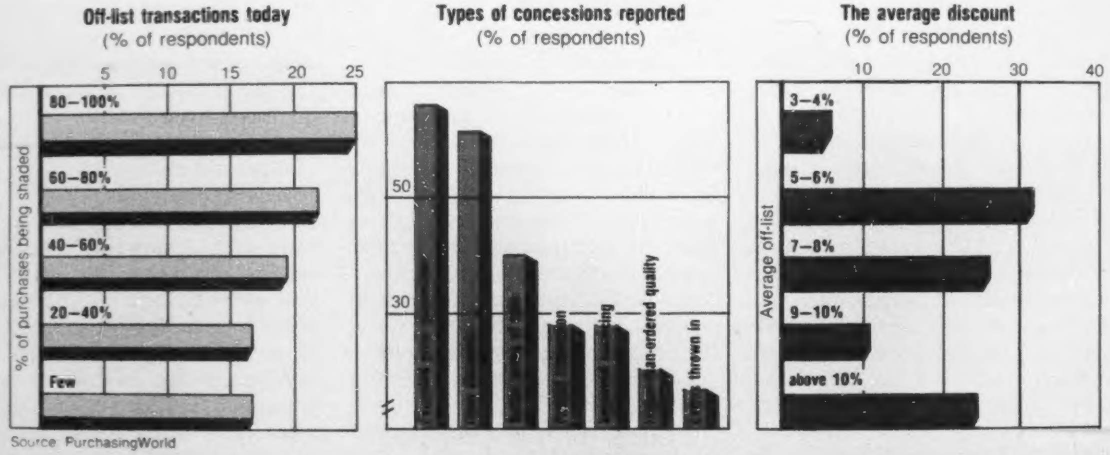
- **The extent of shading:** The vast majority of respondents report off-list pricing in at least some areas. And one out of every four says that 80% of major purchases are being shaded in one form or another.
- **Now vs. a year ago:** Some 28% note more shading now than a year ago—more than offsetting the 22% who find it more difficult to chip away at official lists. The fact that the remaining 50% say they're getting the same good deals as 12 months earlier can't be downplayed either.
- **Where the buys are:** Viewed from almost any perspective, deals are available for those willing to look for them. Items prominently mentioned as being discounted include steel, non-ferrous metals, plastic resins, fuel oil, petrochemicals, solvents, packaging, paper, glass, electronic parts, fasteners, hand tools, and machinery.
- **Factors behind the weakness:** Excess supplies, foreign competition, and so-so demand are all mentioned by half or more of the respondents—with close to 20% adding lack of vendor cost pressure as still another price depressant.
- **Type of concessions:** Extended price guarantees, noted by two-thirds of those queried, seem to be the most popular way of reducing tags. But cash discounts were a close second. Other tactics used to chip away at list prices (with the percentage of respondents benefitting): better terms of sale (39%), freight absorption (28%), improved servicing (28%), better-than-ordered quality (22%), and the throwing in of extras (17%).
- **The net impact:** The average discount from all of the above comes to near 7%—1% above last April when *PW* asked the same question. And about one in four now claim they are getting price breaks of over 10%.
- **A look ahead:** There's basically unanimous agreement that no basic change in the above pattern is likely for the rest of 1986. An impressive 56% don't see any change through all of 1987.

PMs, aware of their favorable bargaining position, are going all-out to keep vendors on the defensive. Asked to comment on strategy in the months ahead, almost all indicated that they'll be hanging tough—using hard-nosed bargaining to keep prices down. Survey respondents indicate that they will use such specific approaches as 1) more long-term contracts, 2) demanding detailed cost justification for all suggested increases, 3) more emphasis on just-in-time techniques to shift more of the inventory burden to suppliers, and 4) establishing closer relationships with suppliers to help pare costs.

Additional price guarantees are also high on the PM agenda. One, for example, says he has just been able to stretch such pacts out 18 months—thus locking into a price through 1987.

Some prices will inevitably rise—buyers are expecting some advances in paper, steel, petrochemicals, and possibly some electronic items. But such increases are expected to be buffered by continued discounting in other sectors. ***PW***

Price shading—As buyers see it



Source: PurchasingWorld

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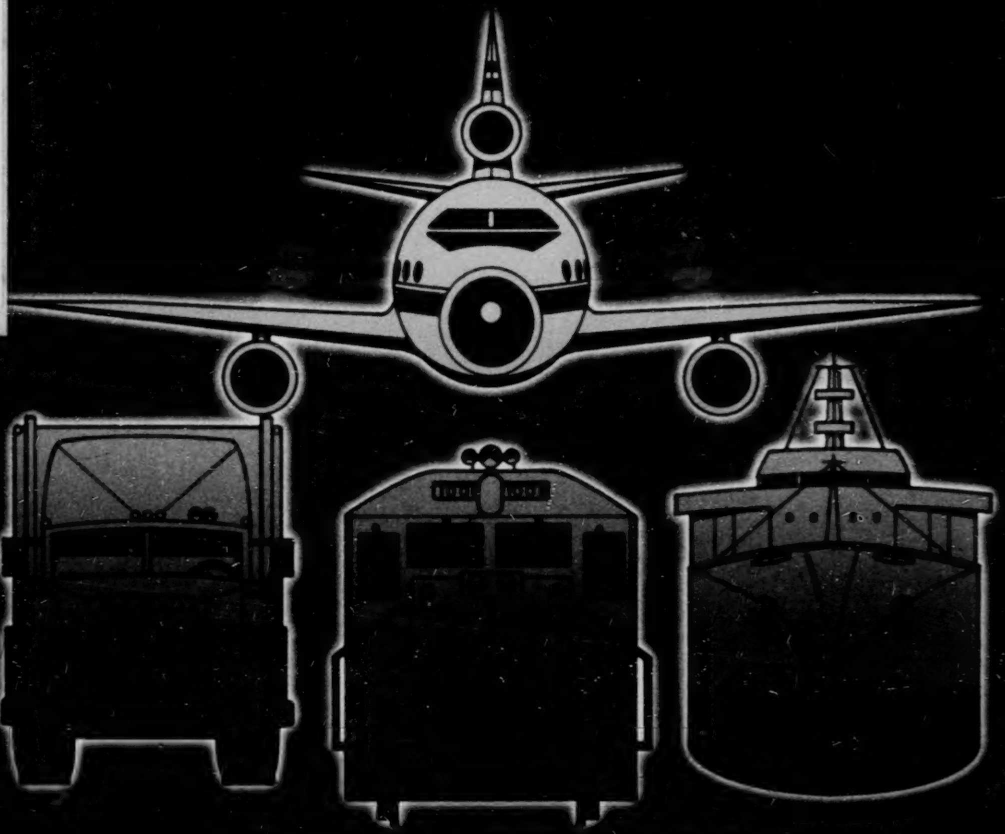


TRANSPORTATION

Pick a mode for bargain buying

What to expect from a vendor conference

Pinkerton on PCs: Dial a database

Countertrade spurs global sourcing

PurchasingWorld®

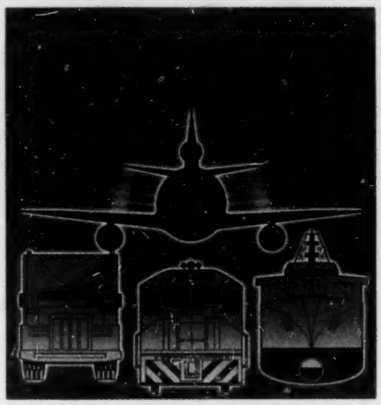
Helping you manage the business of buying

September 1986 Vol. 30 No. 9

Special Report: Transportation trends

48 Pick a mode for bargain buying
Deep discounting and overcapacity in all modes of transportation promise a continuation of the buyers' market for some time to come. But big changes in the way the industry markets its services will also alter the way those services are bought.

54 Buying inbound transportation—Part I
The often overlooked matter of buying inbound transportation can affect the product cost and the scheduling of production lines. Lincoln Electric's Art Todd shares the benefits of his expertise in this important buying decision.



54

Features

34 Clouding the ethics issue with pseudo-ethics
Negotiations columnist Lou DeRose takes a critical look at an N.A.P.M.-sponsored publication on ethics and finds it wanting.

37 Dial a database
Accessing databases with your PC is a valuable resource for the purchasing pro. Jeff Pinkerton gives you a good rundown on how to use databases and where to find them.

44 Freight tabs weighted down by poor demand, competition
Rates for this year will not climb much above 2.5%, but next year's outlook is for a slightly faster rate of 3.3%, according to this report exclusively for *PW* by Wharton Econometrics.

62 Countertrade spurs global procurement
It isn't the best game in town, but countertrade can be an alternative to direct sales in countries that are hard-pressed for cash when it is conducted intelligently. Here are some points to know about countertrade from an expert in the field.

98 PMs want less, will pare inventories
The trend to lower stock levels is accelerating as more industrial purchasing managers say they plan to trim even more in the future.

Buyer of the Year Contest

88

Departments

4 PW Pointers
6 Editorial
8 PW Predicts
17 Datatrak
32 Law
34 Negotiations
42 PW Transportation Report
87 Sample Pak
94 Products
96 Classified
97 Ad Index
98 Survey of the Month

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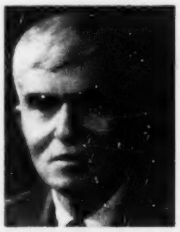
PW PREDICTS

Robert S. Reichard, executive editor

Prices ease on up

A change in the pricing climate may be brewing—with some modest acceleration in the overall inflation rate likely in the months ahead.

Factors pointing in this direction and away from the pricing lull of the past six months: new energy cost pressures, growing repercussions stemming from a weak dollar, lackluster productivity gains, the possibility of higher food costs, and continuing substantial advances in service tabs. Look at each of the above factors in detail:



- **Energy:** Oil prices are already showing signs of moving up, following the new OPEC production curtailments announced a few weeks back. This, in turn, could well strengthen natural gas and coal tags.

All this is in sharp contrast to the eye-opening 25% decline in overall fuel and power costs over the first half of the year. In any case, if the new OPEC accord proves durable, it could well add another percentage point or two onto the general inflation rate.

- **Exchange rates:** The continuing softness of our dollar *vis-s-vis* the currencies of some of our major trading partners is beginning to take its toll. The increase in the price of imported goods has been quite modest (about 7.5% excluding oil) over the past year.

The indirect effects are just as noteworthy—namely the reduced price pressures on competing American goods. Higher import prices have already enabled domestic producers to post increases.

- **Productivity:** Somewhat slower gains will have an impact on prices—tending to raise unit labor costs. This is especially true in the manufacturing sector where efficiency, after exploding at an 8% annual rate in the early years of recovery, tapered off to a 2.6% pace last year.
- **Food:** Prices seem ready to bottom out because of several special factors including the drought in the South and crop problems in the Soviet Union. Certainly it would be unrealistic to expect a repeat of the first half of 1986.
- **Services:** This is one area that really never took much of a price breather. Indeed, there has been a disturbing 6% advance in the last six months.

How much price acceleration can we expect then? First one has to factor in the underlying rate of inflation—one not distorted by recent energy and food declines. This adjusted yardstick shows a steady rise over the past year—on the order of 2% at annual rate.

Next, add in the upward pressures detailed above, and this 2% rate will obviously be higher. Not surprisingly, one big econometric consulting firm is now telling its clients to expect a steady rise in industrial producer prices—with these increases in the next four quarters at annual rate: 4Q 1986 (1.9%), 1Q 1987 (2.3%), 2Q 1987 (2.6%), and 3Q 1987 (3.9%).

Even White House economists, who tend to be overly optimistic, see some price increases ahead—putting the GNP price deflator at 3.7% next year.

Tin

The wages of tin are still falling—to perhaps as low as $2/lb during the next year or so. That's a big drop from the $5.60/lb it was fetching last fall when the bottom fell out of the market.

This new projection by Chase Econometrics hinges on two factors: 1) lingering production excesses and 2) the substantial above-ground inventories held by bankers and brokers.

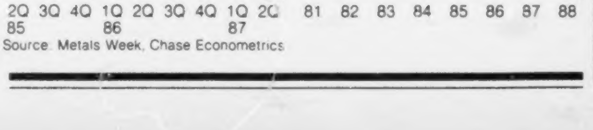
Production of Southeast Asian tin has not been as severely reduced as many analysts had expected. While some operations have been forced to close, increased production in other regions, such as Brazil, are likely to maintain near-term output close to last year's levels.

The second factor, the one that will depress tin prices for years to come, is the 40,000 tons of collateral metal turned over to bankers and brokers by the International Tin Council (ITC) as partial payment of its debts. The new owners of the metal will begin releasing tin into the market more rapidly, says Chase, as prices head lower over the next 18 months.

Adding to near-term downward pressure will be disappointing consumption trends. Analysts at Chase estimate that U.S. chewup will actually slow down a fraction next year—dropping to 48.14 thousand tons. Worldwide, the increase is estimated to be less than 1%.

This pattern isn't likely to change much over subsequent years as the tinplate market continues to stagnate. The study now puts the estimated annual increase in domestic demand at 0.05% through 1990.

Tin: portrait of a bear market



Source: Metals Week, Chase Econometrics

PW PREDICTS

Steel

CURRENT SITUATION: Buyers are still in control despite recent work stoppages. Chalk it up to lackluster demand—3Q domestic shipments are down about 2 million tons from April-June levels. True, a new 2-3% increase has been posted on flat-rolled products. Even so, these items are still under early spring levels. And while the weakening dollar is making overseas bargains harder to find, imported steel is still a big problem—imports still make up 23% of the U.S. market.

DEMAND: Domestic mills should ship only about 70 million tons this year—several million under early 1986 estimates. Much of this stems from fairly poor performances in the auto and machinery industries but structural changes are also playing a role—cars are getting smaller and other materials are replacing steel. **Steel consumption should total only 93 million tons this year —off 4 million tons from 1985.**

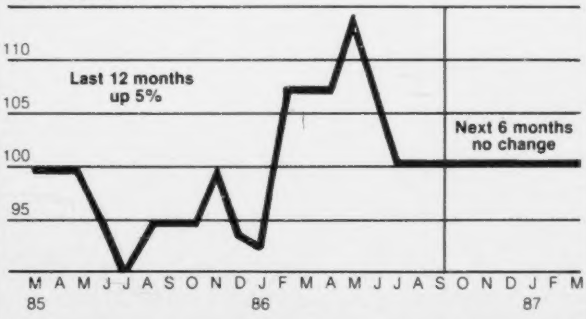
SUPPLY: There's just too much capacity around. The industry continues to operate at only 70% capacity—pretty low in the face of near 16% capacity reduction of the past five years. Even with the predicted shutdowns, **supplies should be ample as demand rises only 2% a year and imports continue to menace.** One note: capacity cuts will generally be by big integrated producers, so minimills will become more important. Watch for their market share to increase from 18% currently to 25% by 1990.

PRICE OUTLOOK: Softness is likely once strikes are over. While lists may climb a few percentage points, there won't be much increase in transaction quotes. Price depressants include: 1) imports, 2) reports that automakers will pay no more for their steel in 1987 than they did in 1986, and 3) continuing domestic mill cost reductions.

Steel prices

C-R sheet (market level)

Index: Feb. 1985 = 100



Aluminum

Market ingot remains mired in the mid 50s as threats of major strikes recede. Adding to the weakness is the fact that customers are currently relying on their substantial strike hedges. Another factor is the still-more-than-ample global capacity—with more of the light metal from Brazil, Canada, and Australia scheduled to come on stream this year. And there is still potent import competition—especially in extruded products where some independents were recently forced to lower tags as much as 10-15¢/lb. On a more bullish note—1986 demand should be up 2-4% both in the U.S. and the rest of the Free World.

Copper

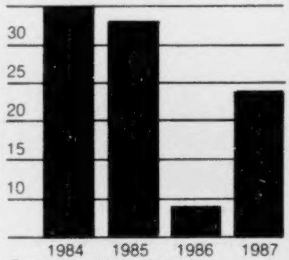
The relatively peaceful resolution of domestic labor problems is putting downward pressure on prices. And demand is off as major automotive and machinery markets level off. Producer prices shouldn't rise much above the low 60s over the next few months. They could even edge a bit lower. About the only positive sign for the industry is that costs are going down. New labor pacts are estimated to have trimmed anywhere from 4-8¢/lb from overall production outlays.

Robotics

Sagging capacity use and anemic bottom lines are putting a crimp in growth. Production is expected to be up by only 7%—far under the 30% + advances of 1984 and 1985. But look for renewed acceleration in 1987 (to 24%)—on a combination of improved operating rates, a smaller trade deficit, and increased profitability. The numbers, supplied by Henderson Ventures, also indicate a change in emphasis over the next five years. There will be a gradual transition from today's simple robot to more intelligent ones that have machine vision and/or voice synthesis capabilities.

U.S. Robotic demand

(% change in current $)



Source: Henderson Ventures

Polyethylene

Current ample supplies could give way to possible tightness over the longer pull if new expansions don't get underway soon, warns U.S.I. Chemicals. The big firms estimate that 3.5 billion tons of additional HDPE-LLDPE capacity (35% above current levels) will be needed by 1992. Reason: Consumption of these two formulations is forecast to grow 6% annually. By contrast, conventional LDPE use will remain basically the same over this period—at about 5.0-5.2 billion lb annually. By 1992, combined HDPE-LLDPE will comprise 75% of all the polyethylene used—up from only 60% this past year.

Office space

It's still a buyers' market—with vacancy rates (compiled by Coldwell Banker) rising to near 17% for downtown areas and to an even higher 23%+ rate in the suburbs. Major downtown areas with more than 20% rates include Denver, Miami, Nashville, New Orleans, Oklahoma City, Phoenix, San Antonio, and San Jose. There was a big surprise in New York where downtown and midtown rates were only 11.2% and 8.3%. Industrial vacancies hit a new peak of 5.7% nationally.

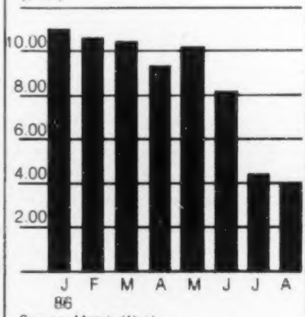
Semiconductors

Substantially higher prices are being posted following the signing of the new U.S.-Japanese trade accord which forces our Far Eastern competitor to sell at more realistic cost-related levels. The new average Japanese floor price for 256K DRAMs is about $5+—more than double the recent street price. Some major shifts in sources of supply are also likely as the pact creates a long-term opportunity for other Asian and European competitors to undercut the Japanese. This could spur Japanese suppliers to expand their production base here—and could even encourage some U.S. firms to reenter the market.

Cobalt

Merchant prices continue to slide. In part, this is due to excess supply—aggravated by Zaire which is trying to gain market share equal to its 50% share of world production. Demand has not been all that robust either—with consumption hard put to equal last year's 15.5 million lb. It's not surprising that inventories have mounted and tags have dropped down to near $4/lb—less than half the level in January 1986. Prices could go even lower in the months ahead.

Merchant cobalt prices
($ lb.)



Source: Metals Week

Packaging

A mixed picture here. Glass bottle suppliers, aided by recent plant shutdowns, are said to be getting modest price increases. Corrugated is also starting to move up as producers lift linerboard into the $300/ton-plus range. But corrugated carton increases will be mod-

Plastic resins

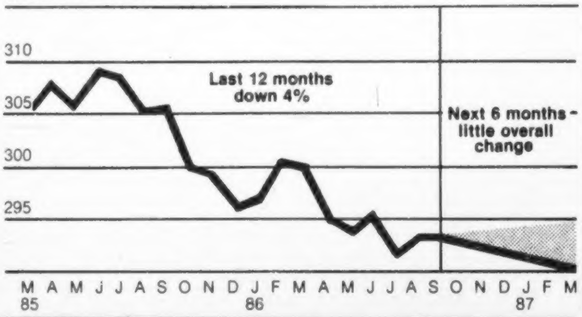
CURRENT SITUATION: It's been a good year for resin users. Supplies have been more than adequate and **prices have actually dropped a bit—in line with ethylene, propylene, benzene, and other petroleum-based feedstock costs.** Liner/film grade low-density polyethylene has recently gone for as low as 25¢/lb and newly posted hikes probably won't hold. The picture is similar for general purpose/molding grade HDPE (26¢/lb vs. 31.5¢/lb earlier), homopolymer polypropylene (33¢/lb vs. 37¢/lb earlier), general purpose polystyrene (33¢/lb vs. 35.5¢/lb), and pipe grade PVC (29.5¢/lb vs. 30.5¢/lb).

DEMAND: Overall shipments of major thermoplastics could approach 40 billion lb this year—about 4% above 1985 and well above the U.S.'s real economic growth rate. The biggest advances are seen for PP where usage could be up as much as 7%. Other estimated demand costs are as follows: HDPE (5%), PS (4.5%), ABS (4%), PVC (3.5%), and LDPE (1.5%). **Next year could be even better—Look for a 5%+ advance.** Behind this optimism: the good outlook for construction and inroads into traditional metal markets.

SUPPLY: Easy availability is highlighted by the industry's overall 86% operating rate. The rate is higher for HDPE (94%) but this is deceptive since some producers can swing from LLDPE to HDPE. There has been a significant increase in LDPE imports—and more are expected as Saudi Arabia enters the fray. **Next year, watch for only slow operating rate increases as capacity additions offset projected demand gains.**

PRICE OUTLOOK: Be prepared for near-term attempts to shore up tags—but most will be unsuccessful because of 1) continued competitive infighting, and 2) lack of feedstock cost-justification. Longer term—much hinges on how successful OPEC is in propping up oil quotes. Assume a $15/bbl crude price for next year and plastic resin price averages are likely to rise only 2-3%—**not nearly enough to recoup the declines of the past year.**

Plastic resin prices
Index: 1967 = 100



PW PREDICTS

Import prices

The weaker U.S. dollar is gradually translating into higher import prices.

Lest there be any doubt on this score, take a look at the chart below. It shows tags on incoming shipments rising for four consecutive quarters.

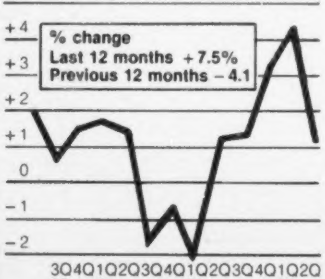
Over this 12-month period, these imports have advanced an average of 7.5%—with a 1% increase over the latest three-month period. That's a sharp reversal from the previous twelve-month period when these same products dropped by more than 4%.

Best bet for the next three months: another 1-2% overall advance. Here's a detailed rundown:

- **Crude materials:** Prices over the April-June span rose 1.2%. The largest increase occurred in pulp and waste paper (6.7%).
- **Chemicals:** This was one of the few areas experiencing a continuing decline—reflecting the downward influence of oil on petrochemicals. On the other hand, boosts were recorded for pharmaceutical products and manufactured fertilizers.
- **Intermediate products:** Large increases were registered for cork and wood products (2.7%), and non-metallic mineral manufactures (3.3%). Smaller increases were noted for leather, rubber manufactures, textiles, and iron and steel.
- **Machinery:** Prices for imported machinery and transport equipment rose 3.4% during the second quarter—compared with increases of 3.6% and 4% in the previous two quarters. For the year ended June 1986, averages were up 12.4%.
- **Miscellaneous manufactured articles:** Big boosts were noted for professional, scientific, and controlling instruments and apparatus (5.7%)—with the 12-month advance here in the 22% range. Other increases were reported for photographic equipment, optical goods, and watches (4.4%), plumbing, heating, and lighting fixtures (2.8%), furniture (2.4%), and apparel (1.4%).

Import prices head higher
(All imports except fuels)

An overview
(Percent change from previous quarter)



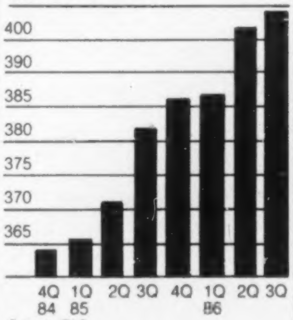
Source: Bureau of Labor Statistics

The details
(% increase over past year)

Textiles	4.2
Steel bars, rods, shapes	3.0
Fasteners	4.7
Tools	9.1
Elec. motors and gener.	17.2
Textile mchy.	15.6
Printing mchy.	28.3
Metalworking mchy.	19.0
Heating and cooling eqpt.	22.5
Pumps & compressors	9.4
Mechanical handl. eqpt.	23.6
Bearings	14.7
Office mchy.	17.0
Elec. mchy.	4.2
Autos	14.7

est—with quotes averaging near $40/msf by year-end—only $1-2/msf above current levels. Folding cartons are also showing some firming. But plastic films remain weak. And few changes are reported for both drums and metal cans.

Glass container prices
Index: 1967 = 100



Source: BLS

Methanol

Prices continue to weaken. Quotes are now running around 30¢/gallon (Gulf Coast) for contract transactions. That's off about 2¢/gallon from late spring levels. Behind the easiness: oversupply, high inventories, and reduced demand for oil field products because of the decline in oil exploration. But prices may be ready to bottom out before too long because of 1) seasonal firming in some end use demands and 2) increased use in MTBE (as new capacity for the octane enhancer continues to come on stream).

Communications

Count on somewhat lower 1987 and 1988 telephone bills—with the downward push coming from a new FCC ruling calling for a reduction in AT&T rate of return on interstate calls. Best bet: a 3-5% decline on both regular and WATS long-distance service. And it is likely that MCI and other competitors will follow suit. The new ruling, however, is not expected to affect international, intrastate, and private line services.

Zinc

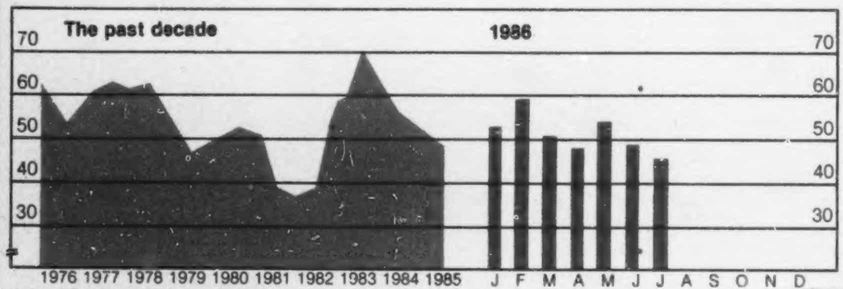
European metal has been coming in during recent weeks at about 40¢/lb—thus undermining any efforts by North American producers to enforce higher posted prices. In any case, buyers say there's enough zinc available at 40-41¢/lb to satisfy demand. Supporting predictions that prices are ready to top out are two other factors: 1) the settlement of some strikes, and 2) the soft demand from steel mills. On the other hand, year-to-date momentum should be enough to push 1986 slab zinc consumption up about 3%, to near 915,000 tons. And the longer-run outlook appears fairly good as Detroit shifts more car bodies over to galvanized steel construction. This should be enough to assure about a 2% annual rate of growth.

PW Predicts keeps you ahead on key issues in buying

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Slump to jump a little

Figure on another few months of relatively sluggish economic growth.

The basic problem lies in manufacturing where gains have been slim. This is summed up by the N.A.P.M. Business Barometer—a combination of several sensitive factory indicators (see accompanying chart)—which has been holding below the neutral 50 level for two months running.

The lackluster near-term outlook is further substantiated by fewer new orders in manufacturing in recent months—overall factory backlogs have dropped about 1.5% since early spring.

There's no need to panic, though. There are still some strong positive forces working against any actual decline and pointing the way to perhaps some economic acceleration by yearend or early 1987.

These plus factors include:

- Still-snug inventory levels which assure additional production as new orders come in.
- Low interest rates and the propect of modest declines over the next few months.
- An expected improvement in the trade deficit stemming from a weaker dollar.
- A strong housing market—with starts expected to remain in the 1.8-1.9 million unit range through the remainder of the year.
- Fairly strong consumer purchasing power bolstered by a combination of growth in spendable income and little appreciable advance in the cost-of-living.

Consumer confidence and spending plans remain at high levels. The Conference Board reports that the number of families surveyed who expect business to be better some six months from now continues to outnumber those who see some deterioration by a 2:1 margin.

Buyers are basically optimistic (see accompanying chart). The Board's buying plan index remains near 111 (1985=100)—the highest point in years except for one unexplained jump this past April. In any event, nearly 9% of the surveyed families say they plan to buy a car over the next six months and close to 18% are contemplating buying a major consumer appliance—both fairly high percentages *vis a vis* earlier 1986 findings.

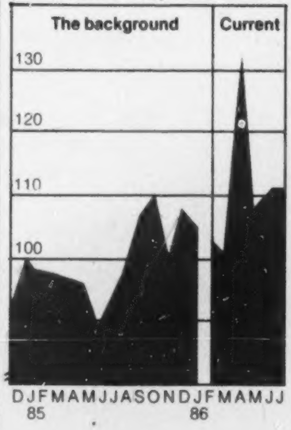
The relatively good auto outlook is further backed up by recent Detroit projections which call for a 10.7-10.9 million unit year.

Capital goods trends, while hardly buoyant, seem to be holding. As the chart illustrates, orders have been relatively flat.

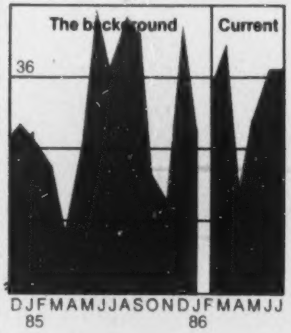
However, there could be some pickup here once the details of the new tax law are finalized and analysed. On the other

Leading indicators

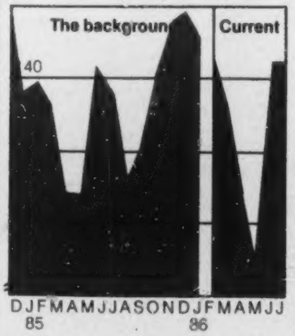
1. Consumer buying plans
(index: 1985 = 100)



2. Capital goods orders
(bil. $, seas. adj.)



3. Help wanted
(index: 1967 = 100)



hand, any big gains here have to wait on a rise in factory operating rates which, at latest report, were still at 78-80%.

Another encouraging sign is the pickup in help-wanted advertising (see chart). It reverses the downtrend of the past few months—and suggests that unemployment rates (July was 6.9%) won't be rising as some analysts had been predicting.

What does it all add up to? While near-term industrial production will remain disappointing (little more than a 1-2% annual rate of advance seems likely for the rest of the year), the longer-term prospects seem rosier — with first half 1987 factory output gains now expected to run 2.5-3.5% at annual rate.

Environmental outlays still a big bite

Anyone who thinks that the regulators in Washington are easing up on pollution control and safety equipment requirements ought to see a new McGraw-Hill study of top American firms that shows this non-productive capital spending is actually on the rise.

The study indicates that spending on pollution control equipment is expected to advance by 8.5% this year to $10.4 billion. And outlays for safety and health gear are up 5% to $7.1 billion.

It also doesn't seem likely there will be any respite next year when combined capital spending for these mandated environmental items is expected to total $17.3 billion—virtually unchanged from this year.

For pollution control, a handful of industries will continue to bear the brunt of this burden. In descending order of outlays, these sectors are petroleum, electric utilities, chemicals, paper, and automotive.

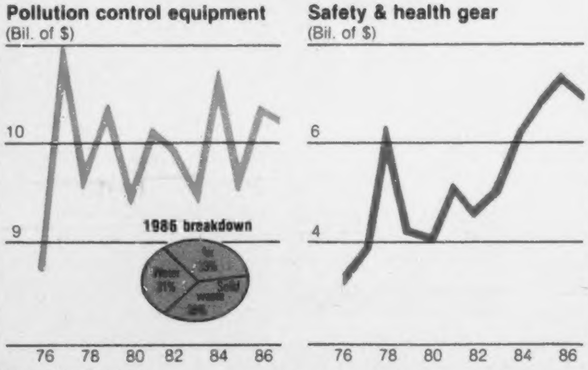
These industries' outlays for pollution control comprise a relatively large percentage of their overall capital equipment dollars—ranging from a high of 6.3% in the petroleum industry to 3.7% in automotive and utilities industries.

Some of these same industries also face hefty outlays for safety and health. The chemical industry, for instance, will shell out another 5.5% to protect its employees.

The all-industry outlay earmarked for safety and health will run in the 1.8% range for both 1986 and 1987 in contrast to the gradual increases experienced over the past few years.

But if PMs will be spending more on safety and health, they will at least be operating in a relatively stable price environment. The survey indicates less than 2% increase in overall tags for these items in 1986.

Non-productive capital equipment spending: The totals remain high



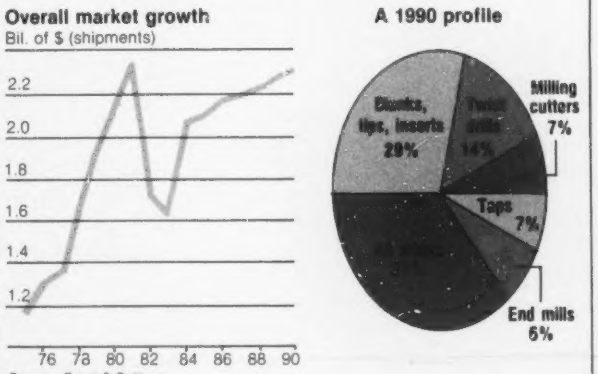
Source: McGraw-Hill

Only a few lumps ahead for expendable tools

Expect major changes in the $2 billion plus expendable cutting tool market over the next few years. Some of the more important trends to watch for, as described in a new Frost and Sullivan 226-page analysis of this dynamic industry:

- New, more sophisticated types of tools will proliferate, prodded by technological developments, faster machine tools, and the use of newer and tougher materials.
- Overall demand growth, as measured by shipments, will be modest. Current projects call for less than 9% advance over the 1985-1990 period.
- Blanks, tips, and inserts will remain the biggest category and will show the greatest growth. This sector should account for 29% of the market for expendable tools by 1990.
- The number of vendors will shrink as mergers, acquisitions, and failures proliferate.
- Medium and large cutting tool users will buy more of their tools through bidding procedures and from an accepted vendor list.
- There will be a tendency toward more direct marketing by cutting tool manufacturers.
- Coated tools, especially the titanium nitride (TIN) type, will show fast growth.
- U.S. manufacturers and

Expendable cutting tool trends



Source: Frost & Sullivan

distributors will continue to look for foreign-made tools to make them more competitive in the domestic market. Manufacturers, in particular, are looking for agreements that can be made to supplement their own lines.

- Imports will continue to capture more of the standard cutting tool market. Imports grew at 20.7% compound annual rate over the past decade and by 1990 will have over 16% of the expendable tool market.

CURRENT PRICES

Oil could pump up tags a tad

Chalk up another month of declining industrial tags as Uncle Sam's bellwether producer price index drops a full percentage point, enough to push overall averages to 5% under year-earlier levels.

But the latest decline is a little deceptive because it reflects the weakness in energy quotes this summer—softness that has somewhat disappeared because of OPEC's newly announced production cutbacks.

It would be unrealistic to expect a repeat of last month, when hefty declines were reported in such key energy areas as gasoline, home heating oil, and residual fuels. These declines were enough to drop the overall fuel and power index by 7.5%.

A much better indicator of underlying trends is the figures for some of the major industrial groupings with the energy influence removed. What that shows is that the government's price index for intermediate products (excluding energy) actually rose by a fractional 0.1% over the past month.

The picture is much the same for more specific sectors. Several key component parts—including electric motors, generators, mechanical power transmission equipment, and bearings—all edged higher. Ditto, capital equipment where price averages are about 0.2% higher.

Construction materials also managed to eke out a small 0.2% gain over the past 30 days, as increases in plywood, hardwood lumber, wiring devices, flat glass, and sand and gravel more than offset softness in asphalt roofing and gypsum products.

A slight upturn also shows up in the chemical and allied products sectors. Thus increases in plastic resins, paints, and organics offset some easi-

This month's breakdown

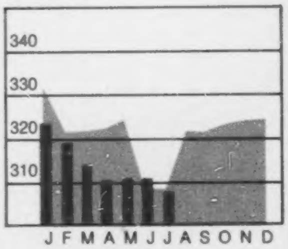
	Latest level (July)	% change from: Month ago	% change from: Year ago
Bearings	370.0	0.3	1.0
Bolts, nuts, etc	277.1	0.0	−0.2
Chemicals, inorganic	295.5	−0.3	−2.2
Chemicals, organic	324.5	0.8	− 9.0
Concrete products	325.9	0.2	1.4
Corrugated cartons	263.7	0.1	−2.5
Cutting tools, small	291.5	0.0	2.5
Electric lamps (bulbs)	347.5	0.1	1.0
Electronic components	202.5	0.7	2.5
Fans and blowers	365.6	−0.6	1.6
Foundry and forge products	363.5	−0.3	0.0
Fuel oil (residual)	434.7	−13.0	−52.1
Furniture, commercial	319.3	1.1	3.0
Gasoline	317.1	−19.2	−46.1
Glass, flat	233.9	1.9	3.4
Glass containers	399.5	0.0	3.3
Gypsum products	347.7	−1.7	2.7
Hand tools	383.6	0.1	2.3
Hand tools, power driven	238.1	−0.3	2.3
Industrial furnaces	395.5	0.1	2.7
Integrating and measuring instruments	236.9	0.7	2.2
Internal combustion engines	354.2	0.3	2.0
Lubricating oil	369.4	−1.0	2.5
Lumber millwork	321.6	0.3	2.6
Material handling equipment	297.0	0.4	0.6
Metal containers	362.3	0.4	1.2
Metal mill shapes (nonferrous)	299.9	−0.3	−2.7
Metal tanks	298.3	−1.3	−2.3
Motors and generators	353.8	1.2	0.5
Motor trucks	311.2	0.0	6.0
Office and store equipment	154.2	−0.1	−0.3
Paperboard	270.5	0.7	1.0
Paper boxes and shipping containers	267.4	0.5	−1.4
Paper office supplies	238.6	0.5	1.0
Paint	282.4	0.4	2.0
Plastic resins	299.3	1.4	−2.7
Precision measuring tools	268.2	0.1	1.9
Pumps and compressors	361.9	0.2	1.5
Refractories	373.1	0.0	0.5
Rubber belts and belting	339.8	0.7	−0.9
Scales and balances	231.3	0.0	0.9
Steel products	348.0	0.0	−4.3
Switchgear	285.3	−0.5	1.2
Textiles, synthetic fibers	150.1	0.5	−3.0
Textiles, gray fabrics	151.8	0.2	0.4
Tires and tubes	233.5	−0.8	−1.8
Transformers and power regulators	232.1	−0.2	0.0
Welding equipment	302.1	0.4	3.2
Wire and cable	205.6	−0.4	0.6

Industrial prices

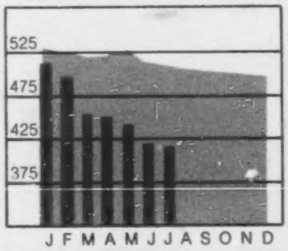
(Index: 1967 = 100)

1985 ▨ ■ 1986

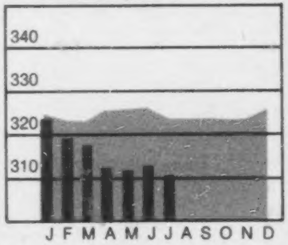
All items



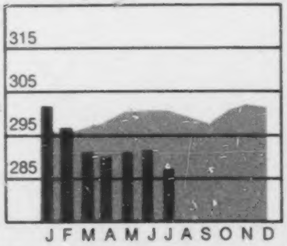
Raw materials



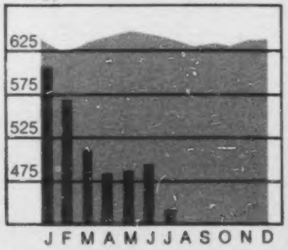
Semifabs, components



Finished goods



Energy



Source: Bureau of Labor Statistics

BUSINESS DATATRAK

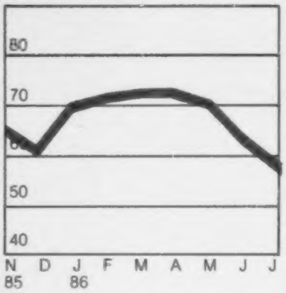
ness in inorganics and synthetic rubber.

Paper and packaging were fairly buoyant as modest increases were posted in wood pulp, paperboard, paper boxes, and paper office supplies.

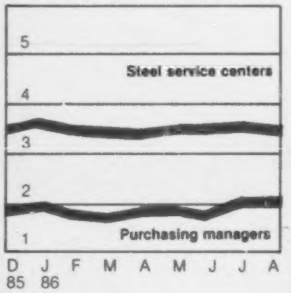
All of this indicates an upward drift in overall averages in the months ahead, with energy adding to rather than subtracting from any advance. One government spokesman says that the shift in energy could add 1-2% onto overall industrial price averages by late fall.

Steel

Operating rates

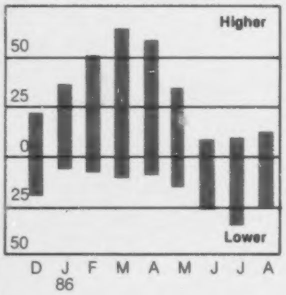


Inventories
(Months supply on hand)

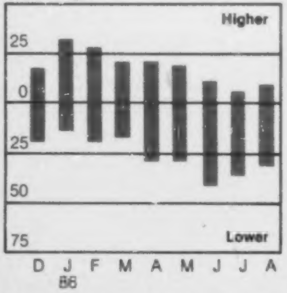


Demand
(Percent of respondents)

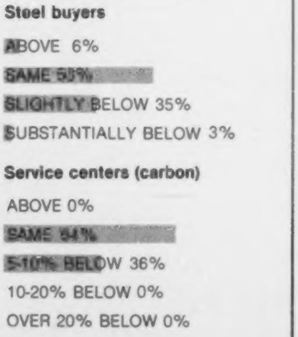
Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

Inventories slimming, prices trimming

Not even scattered work stoppages have changed the tighter procurement strategies of most steel buyers.

Purchasing executives responding to a recent N.A.P.M. survey expressed some concern about possible future tightness—particularly in coated sheets. But this is apparently not enough to stimulate any major pickup in fourth quarter commitments.

In fact, the number of PMs planning to reduce steel receipts (31%) actually outnumber those planning increases (9%) by a 3:1 margin.

Another indication that there is no big push is buyers' opinions that current stocks of the metal are still excessive. Some 44% of the survey respondents say their holdings are "too high."

It is clear why more than half of the queried buyers are now planning on steel inventory reductions in the next six months—far outweighing the 6% who plan to increase their stockpiles. This is unusual in light of the fact that the average steel buyer stocks/sales ratio is in the relatively low 2-month range.

A similar picture seems to be shaping up on the distributor front. Here, too, incoming orders over the next three months are expected to be down. The latest Steel Service Center Institute (SSCI) survey shows those anticipating decreases outnumbering those looking for gains by about a 2:1 margin.

Inventory paring is also a high priority with these middlemen. Three out of every four rate their holdings as "too high"—with only 2% planning increases.

Following up on the inventory situation, SSCI president Andrew G. Sharkey observes that "flat rolled inventories, in particular, call for caution. Although these shipments have been falling since January, inventories have been climbing. If shipment rates fall off significantly here, stock levels could become a problem."

Sharkey isn't all that bullish about overall 1986 SSCI shipments either. He notes that in spite of the high levels in the first half, current shipping levels reaffirm the SSCI forecast that total 1986 shipments will be down 2% from 1985's record pace.

The industry could be facing some long-term problems, too. A recent Paine-Webber analysis lists these four areas of concern:

- Service centers' inability to purchase steel much cheaper than many of their customers. The days of buying steel under levels sold to OEM customers is over.
- Customers are less loyal these days. They tend to get quotes from a number of vendors before placing an order.
- Demand shifts from certain regions such as the Northeast leave excess service center capacity at a time when new potential is being added in other regions such as Kentucky and Tennessee.
- There has been excess investment in processing equipment.

Distributors also have a near-term worry with declining prices. The latest SSCI survey finds that 22% of its members expect lower steel replacement costs six months from now and only 8% expect higher quotes. Distributors say that this could put even more pressure on profits in the next few months.

But what's bad for service centers could be good for steel users. If nothing else, the expectation of lower tags suggests that recent small mill increases, posted because of strike interruptions, will wash out once full industry production is resumed.

Soft prices, however, could be offset by the increasing difficulty in finding import bargains—bargains which are apparently drying up because of the weaker dollar and stricter enforcement of incoming quotas. This is highlighted by the fact that only 38% of the queried buyers note import quotes lower than domestic quotes.

PROCUREMENT STATUS

Nice and easy

There's still no sign of seasonal stretchouts on leadtimes that usually begin appearing in late summer—a time when factories rev up for fall demand increases.

While there hasn't been any deterioration, things aren't getting any easier either. Both *Purchasing-World*'s exclusive leadtime index (now squarely in the neutral 50 zone) and N.A.P.M.'s speed of delivery talley show a draw for faster and slower deliveries—indicating that things are about the same as a month ago.

Even recent strikes don't seem to be having much of an effect. Deliveries of steel, aluminum, and zinc, for example, are coming in pretty much as scheduled. On the other hand, there is some concern about steel over the next few months.

Despite such scattered worries, few buyers seem to be increasing their inventory levels. The old inventory-paring trend of the past year is still going strong—witness the fact that surveyed N.A.P.M. Business Committee members who say they are cutting stocks still outnumber accumulators by nearly 2:1.

Also worth noting: The 33% reporting "lower" inventories is the largest such number since January 1983 when the current economic recovery was just about to get underway.

Forward commitments also suggest a fairly easy situation. In the production materials sector, nearly three out of five surveyed buyers said they were committing 30 days or less in advance—unchanged from the previous month. Only 17% were committing 90 days or more in advance.

On a less optimistic note, there are signs that prices may be ready to inch ahead. Over the past few months increases were noted for corrugated boxes, aluminum, and printing paper. Many oil-related items were lower, but this is expected to change as higher prices for crude begin to have some impact.

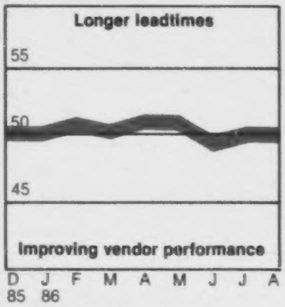
One PM sums it up—"We really don't anticipate any problems over the next few months—despite some edging up in prices."

This is further confirmed by the fact that in the quarter now ending, 28% of surveyed buyers say quotes are coming in below budget. That's twice as many as those who are currently experiencing above-budgeted price levels.

Monthly procurement status report

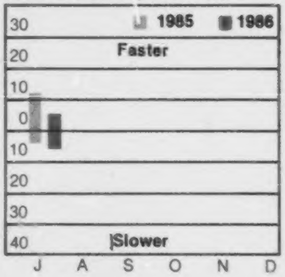
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



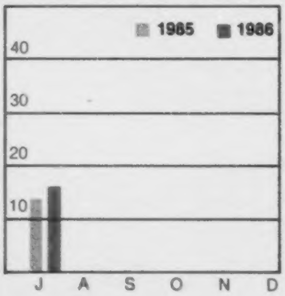
Delivery performance

(Percent reporting deliveries)



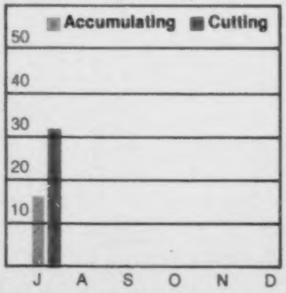
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Offset papers are out to 8 weeks from 4-5 weeks just one month ago. So are special brass/copper rods (to 6-12). In slightly are coated/galvanized sheet (6-7), aluminum sheet (10-12), and special brass tube (4). Little change in electronics—semiconductors are in the 13-20 week range.

Cleveland: Polyethylene has moved out slightly to 1-2 weeks. Most other items are status quo with these weekly waits: cold finished aluminum (8), PVC (2), paint (2-3), hardwood (1-2), softwood (1-3), skids (1-3), corrugated (2-3), waterproof papers (4-5), strapping (on demand), and fiber drums (2).

Los Angeles: A mixed bag here. Extending a bit are foreign fasteners (16-18), pumps (10-12), and custom seals and gaskets (5-7). But more than offsetting these are shrinkages in aluminum tubing (4-6), grey iron castings (6-8), cardboard cartons (3-5), and specialty wire (4-6).

Houston: A few buyers are concerned about vendors filing under Chapter 11. But there seem to be enough backup suppliers to assure

BUSINESS DATATRAK

continued deliveries. Remaining unchanged (in weeks) are polyethylene and polypropylene (2-3), corrugated cartons (2), galvanized steel coils (10), and shop fabricated carbon steel pipe (4-13).

Philadelphia: Some offsetting changes in paper—towling down to half a week but special IBM tab cards out to 4 weeks. Unchanged are reinforced gum tape (1-2), computer paper (1-2), wooden pallets (1), styrofoam molded shapes (4-6), polyethylene paper bags (3-5), and steel banding (2).

Pittsburg: Zinc has stretched out to 3 weeks. Other waits: Polyethylene and PVC (5-6), manganese (4), nickel (2), ton lots of tin (6), steel strapping (2-3), paint (4-5), drums (1), corrugated and folding cartons (3-4), waterproof paper (8), lumber (3-4), and plastic packaging materials (2-3).

Leadtimes (in weeks)

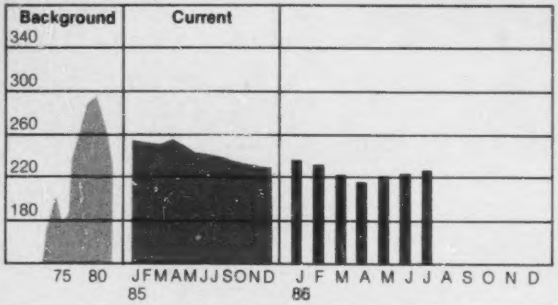
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	7½	5½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	2½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	4	3
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	7
Galvanized (Chgo)	6½	7½	7
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	9	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14½	14½	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	9	9	11
Motors (Phil)	9	9	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	1½
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	1½
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2	1½	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	12	11
Aluminum Plate (Chgo)	12	12	10
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	11	12	9
Brass Castings (LA)	7	7	5
Brass Rods (Chgo)	9	7½	6½
Brass Sheet (Chgo)	5	5	4
Brass Tube (Chgo)	4	8	10
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	7	5
Zinc (Pgh)	3	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	7	5
Fasteners, Std. (Phil)	2½	2½	1½
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	28
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	16	16	16
Pipes & Valves (Chgo)	1½	1½	2½
Pumps (Hous)	24	24	24
Pumps (LA)	11	9	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

(Index: 1967 = 100)

Latest month 227.5
Month before 225.0
Year ago 240.7



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt.	31.00	31.00	29.25
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	25.90	25.90	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.543	.550	.475
Antimony, N.Y., dealer, lb.	1.06	1.13	1.34
Beryllium-copper, cost ingot, lb.	5.65	5.35	5.35
Brass, red, 85%, [sheet], lb.	1.27	1.28	1.31
Brass, yellow, [sheet], lb.	1.22	1.23	1.26
Cadmium, N.Y., dealer, lb.	1.04	1.05	0.85
Copper, electrolytic, wire bars, refd., lb.	.63	.64	.68
Copper sheet, over 24 in., lb.	1.36	1.37	1.40
Lead, common, N.Y., lb.	.22	.22	.19
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	190.00	239.00	317.00
Molybdenum, oxide, dealer, lb.	3.00	2.85	3.09
Nickel, cathode, dealer, lb.	1.86	1.93	2.35
Platinum, dealer, oz.	541.00	437.00	268.00
Silver, N.Y., oz.	5.39	5.08	6.04
Tin, N.Y., dealer, lb.	2.55	2.58	5.81
Zinc, Prime West, East St. Louis, lb.	.440	.415	.410
Zinc, die casting alloy, No. 3, lb.	.475	.475	.485
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.46	16.33	16.22
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	580.00	580.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	310.00-	310.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.229	.247	.236
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	.94	.94	1.04
Cotton middling, 1", N.Y., lb.	.265	.655	.568
Printcloth, 48", 80x80, N.Y., spot. yd.	.70	.72	.60
Army duck, 37", 13 oz., yd.	1.45	1.48	1.70
Blended printcloth, 64", 78x54, yd.	.740	.765	.630
20s combed yarns	1.70	1.70	1.95
Wool 64s, Staple, lb.	1.90	1.95	2.05

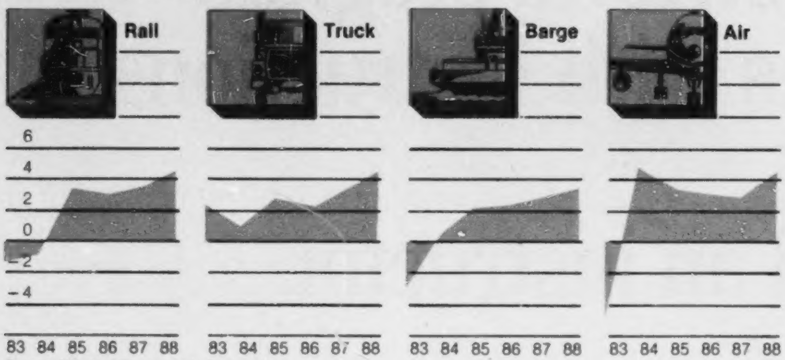
	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.455
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	80.00	N.A.
Benzene, petroleum, tanks, Houston, gal.	.68	.75	1.47
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.52	.52	.52
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.255	.265	.280
Polypropylene, homopolymer grade (market price), lb.	.33	.34	.35
Polystyrene, general purpose grade (market price) lb.	.33	.31	.36
Polyvinyl chloride, pipe grade (market price) lb.	.300	.295	.270
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.21	.21	.30
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.73	.73	.69
Xylene tanks, gal.	1.36	1.36	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	317.70	322.30	327.75
Lumber 2x2 pine, mbf, cl	311.75	315.85	304.15
Plywood, plyform, ¾", msf, cl	592.05	595.95	581.50
Plywood, ⅝", msf, cl	385.50	387.55	383.60
Cement, bulk, ton, tl	64.43	65.56	65.44
Sand, ton, cl	6.62	6.62	6.32
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.01	47.89	47.99
Crushed stone, 1½", ton, cl	7.80	7.83	7.75
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.82	0.83	0.81
Gypsum sheathing, ½"x1"x8", msf, tl	217.57	217.57	202.29
Brick, common, per thousand, tl	185.81	184.96	183.70
Asphalt paving, AC-20	145.53	150.81	176.36
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.23	7.09	7.21
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	8.00	8.50	21.25
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	13.50	13.20	24.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.405	.430	.740
Gasoline, 94 oct., reg., Chi., tank car, gal.	.460	.404	.813
Heating oil, No. 2, Chi., bulk, gal.	.445	.355	.685
Heating oil, No. 2, N.Y., bulk, gal.	.430	.348	.720
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.400	.340	.728
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.260	.335
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	76.00	72.00	77.00
Steel, No. 1 hvy., dlvd., Chi., ton	76.00	70.00	73.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.540	.540	.555
Copper, No. 2, East, wholesale buy, dlvd., lb.	460	.460	.475
Brass, red, East, wholesale buy, dlvd., lb.	.500	.500	.515
Brass, yellow, East, wholesale buy, dlvd., lb.	.310	.300	.325
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.325	.310	.280
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.345	.330	.315
Zinc, old, East, wholesale buy, dlvd., lb.	.17	.15	.11
Lead, clean solids, East, wholesale buy, dlvd., lb.	.120	.130	.105
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	20.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	18.00	15.00	8.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.09	.09	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.11	.11	.20

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Freight tabs weighted down by poor demand, competition

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasts

These new estimates, prepared exclusively for *PurchasingWorld* by Wharton Econometrics, also indicate that this moderation will be evident in all modes—with rate increases for truck, rail, and air cargo trailing year-earlier levels.

Even next year, when economic activity is expected to accelerate a bit, looks good. Overall rates in 1987 should advance by only 3.3%. Following that, in 1988, the pace should pick up as oil prices begin to rise again.

But Wharton analysts hasten to add that there could be considerable variation among shippers depending on how much clout the transportation buyer has. Talks with some buyers in larger firms indicate that they have been able to pare some of the recently announced hikes. In some instances, the buyers are paying no more than they did last year.

With this in mind, here is a more detailed rundown on how things seem to be shaping up by mode:

Trucking: Because of the pervasive buyers' market, most carriers have been able to hold onto only one to two percentage points of the 5.5% general rate increase approved by the ICC earlier this year. Much of the rest has been passed back to shippers in the form of discounts.

That isn't to imply that there aren't some upward pressures, particularly the dramatic increases in insurance costs. But even here things are moderated by a recent Federal Highway Commission ruling allowing carrier self-insurance if the company receives ICC approval on a number of financial and safety standards. This is taking some of the sting out of the insurance boosts.

It's easy to see why Wharton expects overall 1986 trucking rates to rise only 2.5% this year in view of 1) the competitive pressures and discounts noted above, and 2) demand for truck traffic year running less than 3% ahead of 1985 levels.

As for next year, Wharton sees only a 3.3% acceleration. In 1988, when oil is expected to rise, the average advance is expected to remain in the tolerable 4.4% range.

Railroads: Demand is playing a major role here, too. Ton-mile totals in the first half, reported by the American Association of Railroads, is off by almost 1%. While some late 1986 rebound is expected, it is doubtful that this will permit more than a fractional tonnage gain for the year as a whole.

Even with piggybacking bucking the trend with gains of about 10%, it isn't enough to lift the industry out of the doldrums. Recent rate increases have been minimal. For all of 1986, rate increases will probably average around 3.2%. Increasing economic activity and rising input costs should push rates up 3.5% in 1987 and 4.2% in 1988.

Barges: Overcapacity is the major factor in depressed rates here. And demand is not very robust either, as Great Lakes traffic remains flat and grain and coal shipment forecasts indicate little near-term gains.

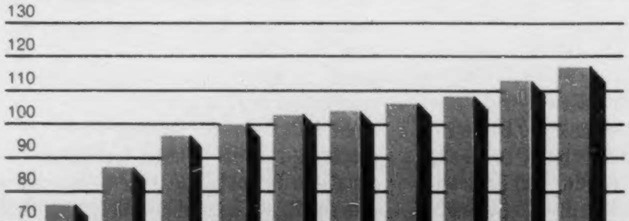
Prices showed the most modest increase of all the modes last year (only 2.1%). And any increases are likely to remain low—2.4% in 1986 and only around 3% for 1987.

Air transport: The industry had a mixed 1985, with passenger service up about 10%, but freight down by a similar amount. Mail freight was up but cargo was down significantly. On the price front: Oil prices have reduced cost pressures and merger and acquisition activities provide a fertile environment for price wars.

Look for price hikes of only 3.1% in the current year (vs. 3.7% in 1985). And, as competitive pressures intensify, there could be even more deceleration (to about 2.7%) in 1987. But 1988 will be a different story, with rates rising about 4.4% as inflation (both in fuel and overall) begins to play a more significant role. ***PW***

PurchasingWorld freight rate index

(1982 = 100)

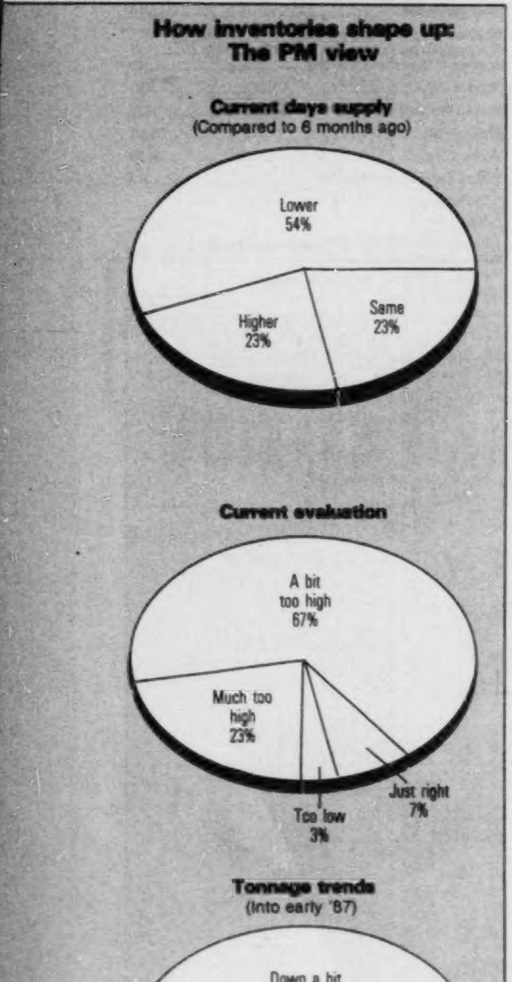


Increase over previous year	
1979	12.6%
1980	14.9%
1981	10.7%
1982	3.7%
1983	2.0%
1984	0.5%
1985	2.8%
1986	2.6%*
1987	3.3%*
1988	4.2%*

*Estimated

PMs want less, will pare inventories

How inventories shape up: The PM view



Source: PurchasingWorld

If industrial purchasing executives have their way, inventory levels could drop even more in the near future.

"There is no reason for any other strategy" observes one Midwestern PM who cites four solid reasons for this continuing trend toward lower stock levels:

1) ample or better supplies,
2) relatively high inventory carrying costs,
3) improved management of existing holdings, and
4) increased willingness by vendors to meet more stringent delivery requirements.

With this in mind, here's a more specific rundown of *PW*'s latest survey of how buyers currently see inventory trends:

- **Current day's supply** averages are down from months ago, according to 54% of the buyers—more than twice the number that noted some increase. This downward trend is also confirmed by the latest government statistics which show the dollar-deflated (real) stock/sales ratio for durable purchased materials at 0.60—down from 0.62 at the end of 1985.
- **Current evaluation** is still too high according to 90% of the surveyed PMs. That far outweighs the 7% who feel they are "just right" and the 3% who rate them "too low."
- **Excesses** are found in metals, such as steel, copper, and aluminum—probably because of some hedge buying to protect against strike interruptions. Other products on the list include bearings, castings, fasteners, plastic products, electronic components, and some chemicals.
- **Near-term plans** of over 60% of the respondents include dropping overall tonnages in the next six months—more than three times the 17% who plan increases.
- **Price hedging** to beat an upcoming price boost is not out of the picture for 40% of buyers, despite their hold-the-line approach. Some of this has been taking place in imports where a weaker dollar promises higher prices before too long.
- **Leadtimes** are no problem. An overwhelming 90% of those queried expect delivery times to remain at or near current low levels.
- **Inventory carrying costs** are averaging 22% (including the cost of money) for more than half the respondents.

This new *PW* survey also points up some of the strategies being used to keep overall inventories down. The most often mentioned approaches are blanket orders, computerization, a gradual shift to just-in-time delivery, better monitoring of production schedules, and improved forecasting.

One buyer tells of his 5-pronged approach to pare obsolete and slow-moving inventory which includes: 1) engineering modifications to permit more uses for current requirements, 2) fire sales of repair parts to customers, 3) returns to vendors, 4) sales to surplus dealers, and 5) scrap disposals.

The increasing emphasis on closer buyer-supplier relationships is perhaps best summed up by a purchasing executive at Beloit Corp.'s Jones Division: "Our philosophy is to communicate with our vendors and promote any blanket orders based on our best plan. This open book communication with our vendors permits them to schedule their production and inventories to coincide with our forecast. However, we do emphasize that the economy drives demand and that the vendor must take some risk and be astute in his inventory production planning."

PW

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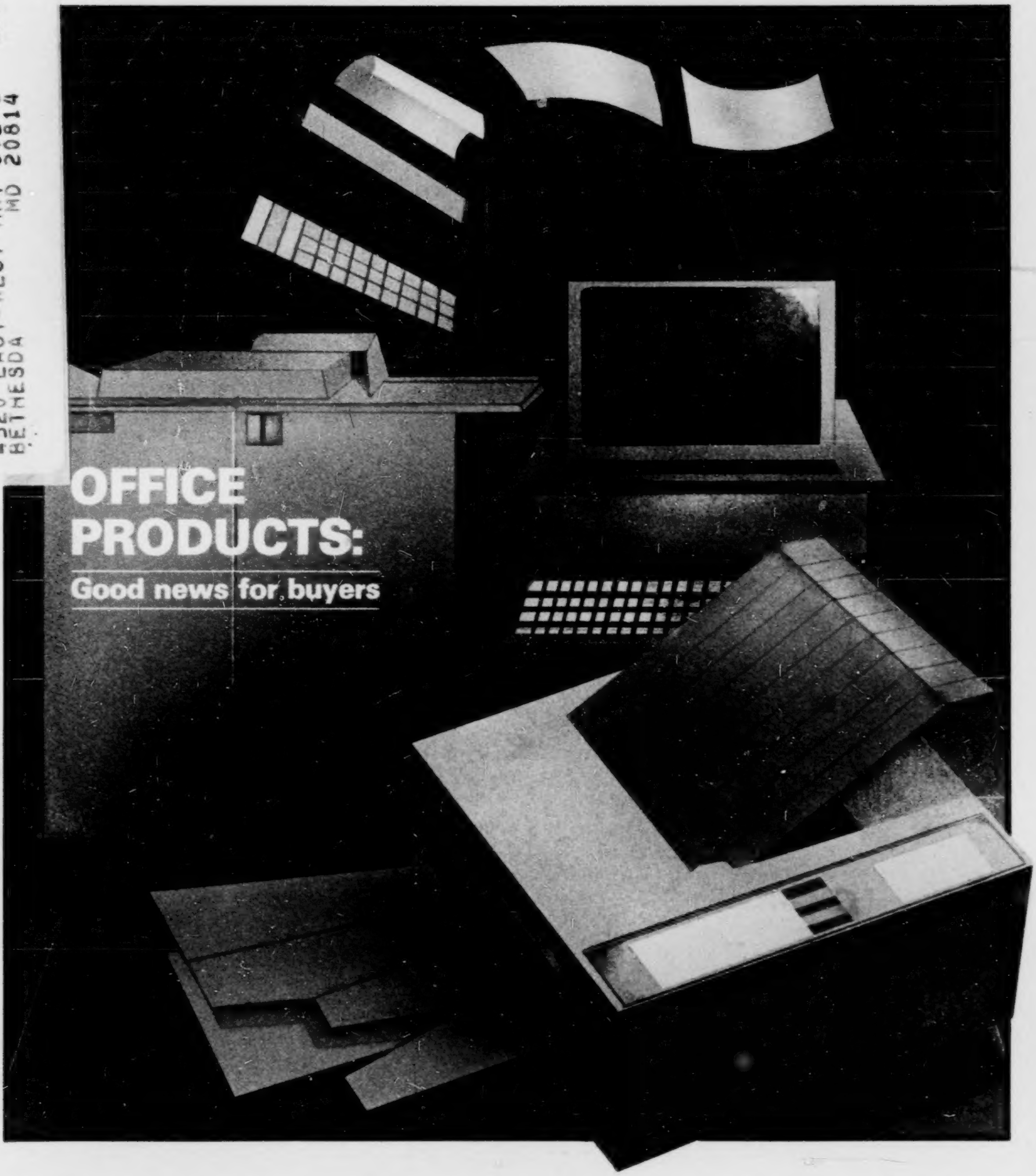


OFFICE PRODUCTS:

Good news for buyers

Using spreadsheets as a purchasing tool

Buying inbound transportation, Part II

Four tigers are hungry for global buyers

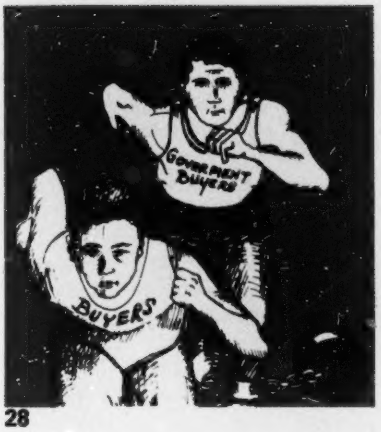
PurchasingWorld® *Helping you manage the business of buying*

October 1986 Vol. 30 No. 10

Special report: Office equipment

42 Good news for buyers of fax, ETs, copiers, and PCs
There are a lot of good buying opportunities in today's office equipment market, but be sure to do your homework—price is only one factor to consider. Here's an update on some of the latest developments in each product category along with a resource checklist.

58 Send in the clones
There's a war going on in the PC market—the clones are making substantial headway into Big Blue's market share. But this can spell good news for buyers.



28

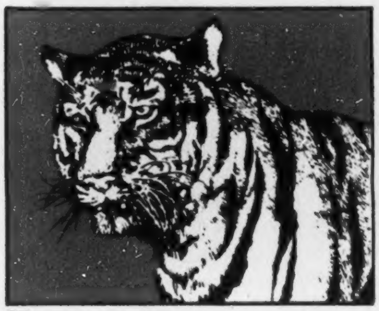
Features

34 Using spreadsheets as a purchasing tool
Spreadsheet software can be a handy tool for the purchasing pro who wants to play "what if?" games. The results can be surprising.

37 The realities of Far East procurement
When you buy offshore, be sure you take care of *all* the details. An experienced consultant in Far East procurement offers some sound advice on how to find a manufacturer, how to have a presence in the host country, and what special details need attention.

60 Buying inbound transportation—Part II
Art Todd takes another view of the inbound transportation buy—this time from the financial manager's perspective—with some good insights for buyers.

98 Ho hum price pressures
Wage boosts are only one key factor in holding prices relatively flat for the next few months. This DRI quarterly forecast takes a look at how prices in key sectors will fare in the months ahead.



37

Departments

4 PW Pointers
6 Editorial
8 PW Predicts
17 Datatrak
28 Negotiations
30 Law
34 Pinkerton on PCs
40 PW Transportation Report
94 Sample Pak
95 Classified
96 Ad Index

Cover by Terri Kabat

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PW PREDICTS

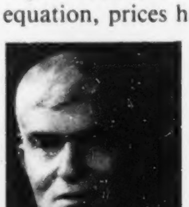
Robert S. Reichard, executive editor

Inflation foiled by mixed forces

This past spring, most forecasters expected prices to get up and move around a bit. Instead they just laid down and stayed there.

The expected 1-2% rise in Uncle Sam's industrial producer price index for the just-ended third quarter not only failed to materialize, it actually declined.

Certainly, energy had a lot to do with it. But even if you remove the sharp drop in oil from the equation, prices have remained relatively stable. This is confirmed by recent N.A.P.M. surveys which indicate that the few buyers who reported higher prices on items are being offset by others who have been paying less for their procurement mixes.



Several forces, other than energy, are behind this surprisingly good showing. First is the disappointing real demand picture. Industrial outlays actually showed a fractional decline from the early part of this year. In turn, this has lowered factory operating rates to 78%—off more than 2.5% from January and low enough to keep suppliers on the defensive.

Another factor is the small increase in labor costs. Latest readings show employment costs up only 4% over the past 12 months, with a good portion of this being offset by productivity gains (3.1% at annual rate for the nonfarm business sector during the first six months of this year). And heavily unionized sectors of the economy seem to be faring better. Collective bargaining agreements during the first half of the year called for only 1.9% pay hikes over the life of the contracts.

The failure of import prices to rise as much as projected is still another unexpected factor in the current inflation lull. Despite the steep drop in the dollar, many overseas suppliers have been reluctant to post any big increases. Some have chosen to pare profit margins instead. Also helping here is the fact that the dollar has not actually declined for some of our trading partners, such as Canada and some of the developing Southeast Asian nations.

Lastly is the continuing slump in base metals and other grassroots raw material prices. *PW* 's sensitive price barometer, which is made up solely of commodity-level products, is now off more than 5% from a year ago.

The big question is whether this set of coincidental forces that is currently depressing inflation will continue. At this point, the answer is probably "no."

PW projections suggest 1) about a 2-3% annual rate of real growth over the next few quarters—enough to nudge operating rates back toward 80%, 2) modest acceleration in unit labor costs—as efficiency gains become harder to achieve, 3) a slow step-up in import quotes, especially in the fabricated areas such as component parts and machinery, and 4) an upward push on raw material prices resulting from somewhat better balance in world markets.

All these forces together are bound to put some upward pressure on the overall U.S. price level. But advances should be modest. *PW*'s industrial producer price forecast calls for only 2-2.5% annual rate of increase by early next year. That's hardly a call for alarm, especially when you consider that 1987 will mark the fifth consecutive year of current cyclical upturn.

Leasing trends

Equipment leasing seems headed for another record year. But gains won't be as big as the 32% and 16% advances in 1984 and 1985, according to Michael Fleming, president of the American Association of Equipment Lessors.

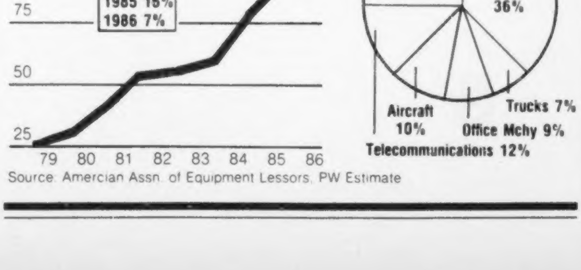
He blames the slowdown in the rate of increase on two factors: 1) a weaker economy, and 2) uncertainty over the final form of the pending tax reform bill.

Nevertheless, Fleming is basically optimistic. He expects a fourth quarter spurt (equipment decisions are often made late in the year) to keep 1986 in the plus column.

Another sign of continuing forward momentum: Many of the big lessors are diversifying into new product lines and are now better described as "asset managers"—combining leasing, managing, and servicing of operating assets for their clients. Fleming says that these asset management skills are valuable in auto leasing, commercial real estate lending, and leveraged buyouts.

The two largest categories of equipment leased last year were computers, with 26% of the new business, and telecommunications, with 12% of new business.

The equipment leasing market



Source: Amercian Assn. of Equipment Lessors, PW Estimate

PW PREDICTS

Zinc

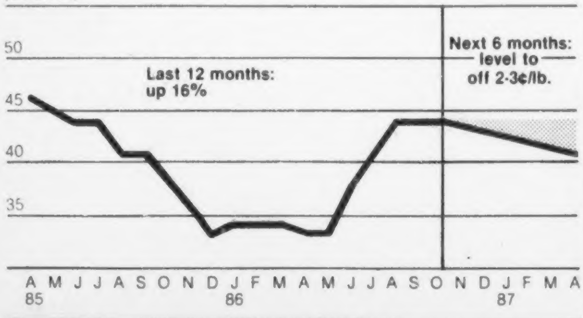
CURRENT SITUATION: The plating and alloying metal is riding high. Prices have jumped from a low of 33¢/lb earlier this year to over 40¢/lb currently. **Behind the increase: Recent production cutbacks and scattered work stoppages have tightened supplies.** A strong overseas market has added to the upward domestic pressure—foreign producers recently hiked their asking prices to $880/metric ton—up from $700/ton in January.

DEMAND: A small U.S. consumption gain (to around 915,000 tons of slab zinc) is likely for overall 1986—thanks to increased use of galvanized metal in the auto and construction industries (the two largest users). But more decline is expected in die casting alloy because of lower car production. One bullish factor for the long run is Detroit's continuing emphasis on galvanized bodies to prevent rust. Upshot: **Domestic consumption should increase by 2.5% a year to 1990.**

SUPPLY: Current snugness is emphasized by the decline in both global production and stock levels. Worldwide mine output is off about 8% this year—with smelter inventories down over 120,000 tons from last year. **But some relief is on the way** from previously struck Australian facilities. Expect some increase from labor-troubled Canadian mines, too. For the long haul, mine and smelting capacity remains adequate. **The world reserve base is good.**

PRICE OUTLOOK: Some downward correction seems likely once supply comes back into balance. But any near-term decline should be slight—with tags remaining well above the lows of the past winter and spring. **Little change is anticipated in the long term.** A study by DRI forecasts only about a 2% annual increase over the next two years. But Wharton Econometrics sees prices remaining at or near current levels through 1988.

Zinc prices
(Cents/lb.)



Steel

Prices are firming a bit—following recent scattered work stoppages. Sign of the times: the 2-3% increase in sheet prices, a 4% boost in some plate tags, and a 7% + advance in mechanical and structural tubes. On a more bearish note, consumption this year has been revised downward by three million tons (to 89 million). Add the fact that imports still account for 23% of the market, and weakness could well develop again when strikes are over. As for next year—very little price advance is seen—averages will climb by no more than 3%.

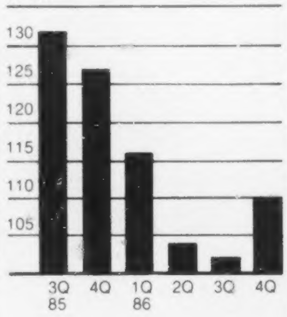
Propylene

Producers are pushing for higher prices—with quotes likely to reach about 11¢/lb for chemical-grade material this month—up about 1.25¢/lb from recent August lows. Behind the increase: rising feedstock costs and some temporary drop in production. Also demand has been fairly brisk. Polypropylene, the largest single end use, is expected to post about a 7% increase in overall shipments this year—thanks in large part to 30% + gains in the domestic film and export markets.

Caustic soda

New attempts to boost this key chloralkali could mean somewhat higher market prices. Best bet: a $10/ton advance. But that would be well under the $30/ton boost some suppliers are asking. This could bring prices up to near $100/ton in the South, and a bit higher than that in the North. Strong demand is probably behind the latest price-boosting attempt—with end use markets (paper, pulp, chemicals, and petroleum refining) running about 3-4% above a year ago. Also inventories, while still high, appear to be a bit more manageable these days.

Caustic soda
(Northern U.S. market price)
($/ton)



Aluminum

The light metal is somewhat on the shaky side—as buyers work off inventories built up in fear of a general strike that never materialized. Thus producers have knocked 4¢/lb off the going ingot price (bringing quotes to 60¢/lb)—and merchant metal goes for 5¢/lb under that. Foundry ingots and fabricated items are down, too. And Free World demand isn't all that robust this year—reaching only 12.5 million tonnes—off fractionally from 1985. Moreover, with production catching up (near 12.2

million tonnes is projected for 1986), it suggests very little additional producer inventory drawdown. Prices will remain at current depressed levels into early 1987.

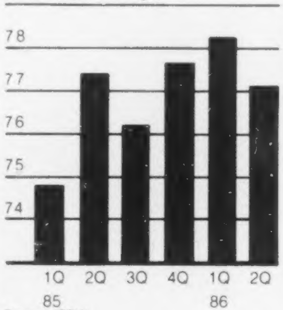
Copper

The red metal seems incapable of generating a sustained rally. Producer material is still fetching below 65¢/lb. One reason: the peaceful resolution of labor negotiations a few months back. Other factors behind the softness: 1) a 4-8¢/lb reduction in labor costs because of new pay rollbacks and 2) the addition of new and revitalized U.S. capacity in Montana and Utah. Demand hasn't been all that brisk either, as auto buying levels off and machinery (which accounts for 14% of the market) actually heads lower. Global capacity is more than ample, too—with output figured at only 83% of rated potential.

Accounts receivable

Buyers are paying a bit more slowly than they did three months ago. The figures, based on a new TRW report, show that only 77.1% of receivables are on time—off more than 1% from earlier this year. The increase is mostly in the 1-60 day overdue sector—the 5.5% who are more than 60 days in arrears remains unchanged. But averages can be deceiving. These industries report that nearly 50% of their receivables are past due: data processing equipment, office equipment, control devices, construction machinery, fabricated metals, printing supplies, and mining.

Accounts receivable
(On-time percentage)



Source: TRW

Office equipment

Add electronic copy boards (first introduced in late 1985) to the growing list of innovative office products. These freestanding boards (with a scanner that will copy what's written or tacked onto it) currently sell for around $3,000. But look for tags to come down significantly—more than a dozen vendors are already fighting for market share. The board's big pluses: They save time in advance preparation of materials for last-minute meetings, eliminate note-taking, preserve important drawings and ideas, and double as a projector screen.

Titanium dioxide

Prices are moving up. The rutile grade has advanced 2¢/lb (to 77¢/lb) and the anatase grade is up 3¢/lb (to near 80¢/lb). Rising costs are primarily respon-

Textile mill products

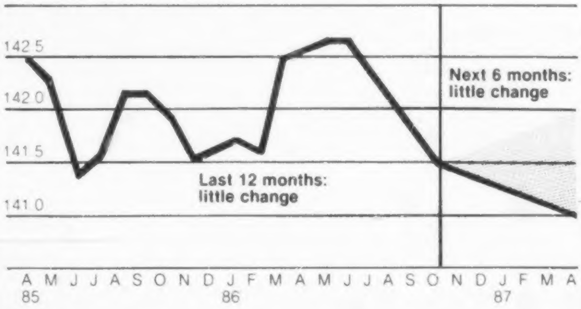
CURRENT SITUATION: Markets are still jittery—reflecting developments that will affect both supply and price for years to come. The recent unprecedented 35¢/lb drop in raw cotton tags is unsettling, as are recent changes in trade ground-rules such as 1) Congress' support of a Presidential veto of a trade protection bill, 2) the conclusion of several bilateral trade agreements with key exporting countries, and 3) ratification of a new Multi-fiber Agreement

DEMAND: Look for fairly good domestic production this year—despite record imports. U.S. producers should increase output by 6-7% over 1985. **But gains will be uneven.** While print cloths are moving well, carpet gains will level off—with only a 1-2% advance vs. last year's 9% + advance. As for 1987, much depends on the efficacy of new import curbs and the general business trend. **Perhaps a 3% domestic increase is possible.**

SUPPLY: Domestic mill operating rates have moved up—a reflection of improved output and rationalization of existing capacity. The number of shuttle looms producing broadwoven grey goods has dropped 20% under last year. **And the current near 90% mill utilization rate is up 5% from a year ago. But any resulting tightness is being filled by imports.**

PRICE OUTLOOK: The picture is mixed. On the downside are sharply lower cotton costs—with competing polyester feeling some pressure. But a weaker dollar should stem downward moves in imports. Brisk demand could help prop prices. Weavers sitting on 3-4 month backlogs should continue to hold onto the new cotton cost advantage. Best bet: **little change in textile mill product averages over the next six months—with a 1-2% increase possible in late 1987** if new import curbs are even partially effective.

Textile mill product prices
(Index: Dec. 1975 = 100)



PW PREDICTS

sible—as natural rutile sells for 12-30% above last year—reflecting new environmental compliance outlays. Prices of chlorine (used in production) are also up substantially. Market fundamentals are strong, too—as demand rises another 2-3% this year and the industry operates in the high 95-100% of capacity range.

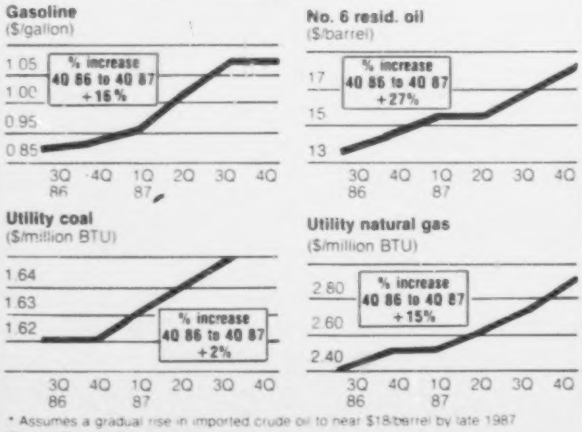
Energy price outlook

Budget for some fair-sized price hikes in the energy sector over the next 12 months.

That's the word from DOE analysts. Based on the assumption that OPEC crude oil will gradually rise to about $18/barrel by the fourth quarter of next year, here's what they see ahead in key areas:

- **Gasoline**: The seasonal demand lull should keep near-term price increases in the 1-3¢/gallon range over the rest of the year. But by next summer's driving season, the average (all grades and services) pump price should be around $1.03/gallon.
- **Heating oil**: Improved margins, combined with higher crude tags, will push wholesale prices to 56¢/gallon and retail prices up to 84¢/gallon. That compares with the 43¢/gallon wholesale and 74¢/gallon retail prices of this past June.
- **Diesel oil**: The pattern will be similar to heating oil. The recent 86¢/gallon low at the retail level will rise to around $1.00/gallon by late next year.
- **Residual oil**: Prices will rise here, too, despite the fact that demand is expected to be off as much as 7% next year because of increasing use of coal and nuclear power. Resid could go to $18.30/barrel by late 1987—well above the recent $13-14/barrel lows.
- **Natural gas**: There is a mixed pattern here. Residential rates will move up only about 2.5% over the next year. But a 15% increase is seen for the electric utility market.
- **Electricity**: Some modest acceleration is projected. While residential rates rose only 1% on average over the past 12 months, a more substantial 3% increase is forecast for the next four quarters.

Energy tabs: heading higher*



* Assumes a gradual rise in imported crude oil to near $18/barrel by late 1987
Source: Dept. of Energy

Polystyrene

The big-volume plastic is turning a bit more buoyant. Market prices moved up about 2¢/lb in late summer—and new hikes are scheduled for this month which could move quotes back into the 35¢/lb+ range again—well above the 31¢/lb low of mid-spring. Strong demand is one factor behind the pickup—with the industry expected to ship close to 4.3 billion lb of the resin this year—up 5% from 1985. And next year's gain could be even bigger—maybe in the 6% range. Another sign of strength: rising operating rates which in recent months have inched above the 85% mark.

Electronic components

A modest demand recovery seems to be getting under way—one that will gather steam in 1987 and 1988. Henderson Ventures (a big market research firm) projects that semiconductor shipments will be up 10% this year—and up more than 20% in 1987 and 1988. Less volatile passive components are also ready to improve—6-7% this year and about 13-15% in both 1987 and 1988. One reason for slower growth in passives is their continued displacement by digital technology and the use of denser ICs having more of the interconnection and passive functions integrated on board.

Electronic components

(% increase over previous year)

Semiconductors		Passives	
85	−22.9	85	−6.4
86	+9.9	86	+6.5
87	+21.8	87	+12.9
88	+27.2	88	+14.7

Source: Henderson Ventures

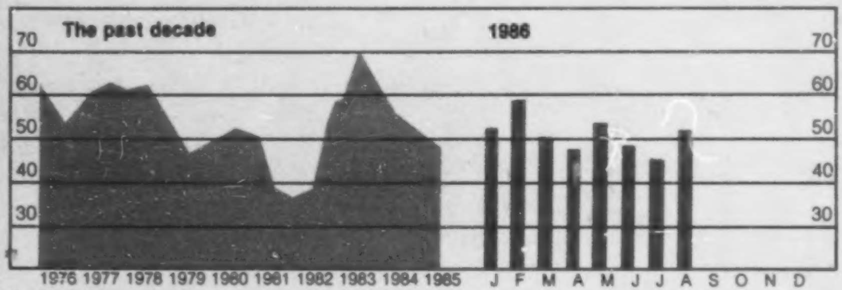
Lead

Firmness is now the order of the day—with several producers moving up into the 23¢/lb range—a significant increase over the less than 20¢/lb prices prevailing as recently as this past spring. Behind the buoyancy: increased seasonal buying by battery makers—the metal's principal customers. Also on the bullish side are declining stocks and a gradual return to supply-demand balance. Thus world-wide refined production will drop to 4.04 million tonnes this year (versus 4.19 million in 1985)—not much above the steady 3.95 million ton consumption estimate. Surpluses are possible next year—bringing prices down to near the 20¢/lb level by as early as next spring.

BUSINESS DATATRAK

N.A.P.M. business barometer

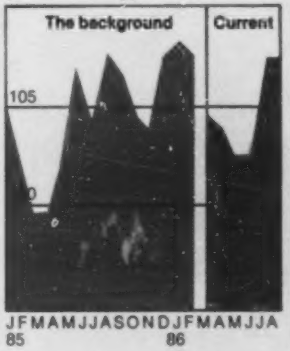
Based on five indicators (employment, inventories, new orders, production, vendor performance)



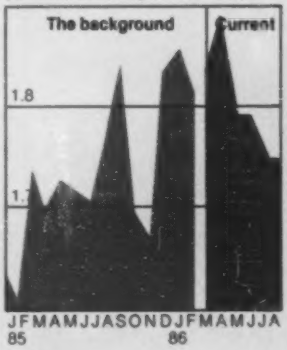
Source: Commerce Dept.

Leading indicators

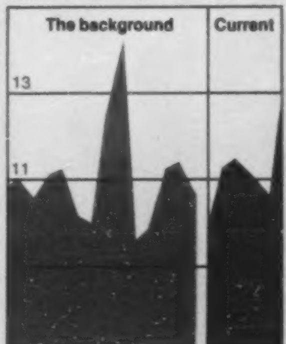
1. Durable goods orders
(Bil. $, seas. adj.)



2. Housing permits
(millions, seas. adj. annual rate)



3. Car sales
(millions, seas. adj. annual rate)



KEY ECONOMIC TRENDS

Two cheers for key indicators

The nearly four-year-old business expansion still has a way to go.

Among the more reassuring signs: 1) recent improvement in key economic indicators, 2) an increase in new orders, 3) continuing low inventory levels, 4) relatively high construction activity, and 5) a well-heeled and optimistic consumer sector.

Looking at each of these separately:

- **Leading indicators:** Both Uncle Sam's widely monitored index and the N.A.P.M. Business Barometer have tended to move up over the last month. The latter bounced back into the positive (above 50) range, signifying that potential pluses are again outweighing negative forces.
- **New factory orders:** Bookings advanced 2.2% over the latest report month—the largest increase since last December. And the gain in the important durable goods sector was even more impressive (see chart).

True, totals are still under late last year, and much of the gain in the past month reflected a surge in defense orders, but, as one economist put it, "A rise is better than a decline, even if it is not as good as it looks on the surface."

- **Factory inventories:** Stock-sales ratios (a measure of days' supply) continue to be exceptionally tight. Most analysts think they are now as low as they can go and that some accumulation is inevitable during the fourth quarter if current demand is to be met.
- **Construction:** The outlook remains bright, despite some fall off in housing permits over the past few months (see chart). Optimism is being generated by 1) falling mortgage rates—now under 10% for conventional loans and 2) continued strength in building awards which show a 12% year-to-date increase in new housing. Most projections now call for 1.9 million new units for the current year—up from last year's 1.74 million units.
- **Consumer spending:** Things are looking up. New car sales, for example, ran at a 12.7 million seasonally adjusted annual rate and September was even better—given the new financial incentives the domestic car makers are offering.

Another bright sign: Detroit's plans for fourth quarter production are up. At latest report, the October-December car assembly target was 2,046,940 units—up 3.7% over last year.

More important, consumers also have money to spend on cars and other big-ticket discretionary items. Aiding in real income growth are such factors as minimal inflation, relatively low energy rates, declining unemployment rates, and the growing realization that tax reform measures will result in a substantial income tax cut for many. The new tax plan, when finalized, is expected to boost the average family paycheck by as much as 7-8%.

The typical consumer also seems to have the motivation (as well as the wherewithal) to spend more. A new University of Michigan survey shows that buying attitudes have edged up to their highest level since the study was first started some 40 years ago.

This consumer strength should be enough to offset such downward pressures as the large trade deficit, sluggish capital spending, and more restraint in government spending. And that's why most projections call for continued output gains. Consensus fourth quarter forecasts call for industrial production to grow at 2-3% annual rate over the last three months of the year—reversing the disappointing results of the past six months.

Cheap fuel drives fleet costs down

There's good news for truck and automobile buyers. The recent sharp drop in fuel tags will effectively offset rising acquisition costs, keeping overall ownership and operating outlays per unit relatively unchanged (79¢/mile for the average truck and 33¢/mile for a car).

Those estimates are part of a new Hertz study which takes a closer look at the latest developments in an industry which gobbles up almost $800 billion each year. Other key findings of the new study:

- **Trucks:** Average depreciation cost is 14¢/mile—with another 10¢/mile earmarked for fuel. Also vehicles in service leaped 8.8% over the past year—from 38.6 million to 42 million units. New sales topped the four million mark for the second consecutive year.

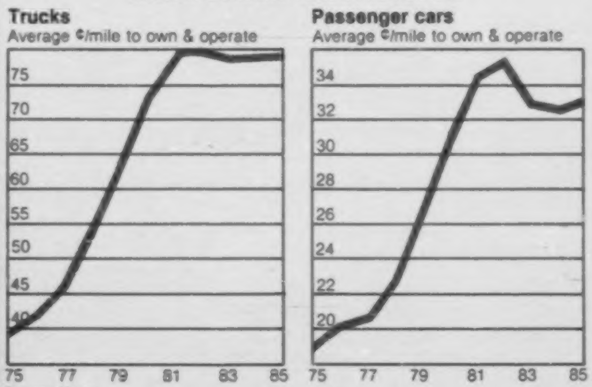
In other truck developments 1) the average annual outlay per unit now comes to over $9,500, 2) average yearly truck mileage is increasing—up 4% in the past year, and 3) more than 13% of this mileage is for vacations, commuting, business trips, etc. (reflecting the increasing number of smaller vans, pickups, and utility units on the road).

- **Passenger vehicles:** Average annual mileage jumped 3.6% over the past year (to 8,894 miles)—the average dollar outlay per car now approaches $3,000/year. The average age of cars is now near 7.6 years—two years more than in the late 1960s just before the oil embargo.

Some interesting numbers are also presented on how car costs vary—depending on the size and number of years held. A new compact which is driven 10,000 miles a year and is held for five years costs about 48¢/mile—15% more than a subcompact but 10% less than an intermediate model.

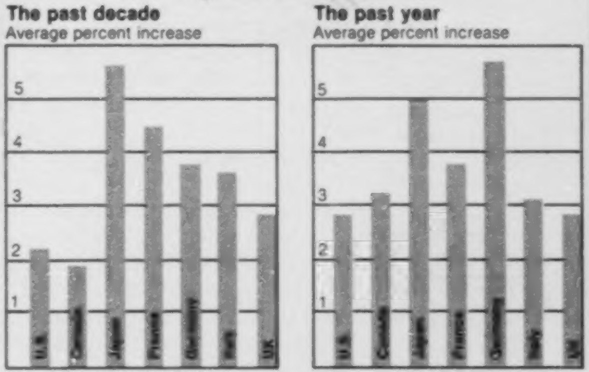
Those same vehicles driven for only two years show that average-per-mile costs rise about 13-15%. On the other hand, if you hold onto the vehicle for 10 years, costs drop 20-23% from the 5-year benchmark figure.

Motor vehicle costs level off



Source: Hertz

Factory productivity gains: A global comparison



Source: Bureau of Labor Statistics

Whither U.S. productivity?

The nation is still not faring all that well in the international productivity battle.

Although U.S. factory efficiency gains over the past year have been in the fairly respectable 2.8% range, they have still lagged behind those of most Western World competitors. West Germany and Japan, for example, racked up 5.7% and 5.8% increases—with the trade-weighted average of nine foreign countries estimated to be up by 4.1%.

The picture is equally bleak when viewed from a longer-term perspective (the last decade). Again, the U.S. is at the low end of the totem pole—with its 2.2% average annual advance over the past 10 years coming out far below that of Japan (5.6%), France (4.5%), West Germany (3.8%), and even the United Kingdom (2.8%).

This could explain why the recent weakening of the U.S. dollar has not helped that much in reversing our trade deficit.

BUSINESS DATATRAK

Productivity, along with pay hikes, helps determine unit labor costs—the major element in overall production costs.

And the current year doesn't promise any dramatic change in productivity. U.S. efficiency so far this year has moved up at only a 1.3% annual rate—with little more than a 2% gain projected for this year as a whole.

Similar projections for the rest of the industrialized world are not yet available. But right now, they should at least be above the current 2% domestic rate. This indicates that U.S industry is in for more rough competition in the quarters ahead.

The basic problem, say most business economists, is that the U.S. is still not earmarking enough money for new automated equipment—the kind that can make a significant difference in output per manhour. Most forecasts for equipment spending project a drop for the rest of this year—and another small decline possible for 1987.

This month's breakdown

	Latest level (August)	% change from: Month ago	Year ago
Bearings	357.0	0.0	0.8
Bolts, nuts, etc.	278.0	0.3	0.1
Chemicals, inorganic	294.9	−0.2	−2.3
Chemicals, organic	320.6	−1.2	−11.6
Concrete products	325.0	−0.3	0.7
Corrugated cartons	266.9	1.2	0.1
Cutting tools, small	292.9	0.2	2.0
Electric lamps (bulbs)	348.2	0.2	1.0
Electronic components	202.5	0.0	2.4
Fans and blowers	365.6	0.0	1.6
Foundry and forge products	361.9	−0.4	−0.7
Fuel oil (residual)	360.8	−17.0	−59.5
Furniture, commercial	318.2	−0.3	2.3
Gasoline	310.7	− 2.0	−46.0
Glass, flat	234.1	0.1	2.9
Glass containers	400.0	0.1	3.3
Gypsum products	343.9	−1.1	1.7
Hand tools	384.1	0.1	2.4
Hand tools, power driven	237.7	−0.2	2.0
Industrial furnaces	395.1	−0.1	2.6
Integrating and measuring instruments	236.4	−0.2	1.8
Internal combustion engines	354.0	−0.1	2.0
Lubricating oil	365.6	−1.0	−1.0
Lumber millwork	321.8	0.1	2.5
Material handling equipment	296.9	0.0	0.5
Metal containers	362.5	0.1	1.3
Metal mill shapes (nonferrous)	300.7	0.3	−2.5
Metal tanks	298.7	0.1	−2.4
Motors and generators	353.3	−0.1	0.5
Motor trucks	306.3	−1.6	4.4
Office and store equipment	154.5	0.2	0.4
Paperboard	274.1	1.3	3.1
Paper boxes and shipping containers	270.7	1.2	0.8
Paper office supplies	237.5	−0.5	−0.1
Paint	282.4	0.0	1.9
Plastic resins	294.6	−1.6	−3.9
Precision measuring tools	268.2	0.0	1.9
Pumps and compressors	362.4	0.1	1.5
Refractories	373.1	0.0	0.5
Rubber belts and belting	335.1	−1.4	−0.8
Scales and balances	231.3	0.0	0.9
Steel products	348.1	0.0	−4.1
Switchgear	286.6	0.5	1.5
Textiles, synthetic fibers	149.6	−0.3	−3.3
Textiles, gray fabrics	151.8	0.0	0.9
Tires and tubes	233.5	0.0	−1.1
Transformers and power regulators	233.9	0.8	0.5
Welding equipment	302.1	0.0	3.2
Wire and cable	205.4	−0.1	−0.2

CURRENT PRICES

Declines narrow as prices flatten

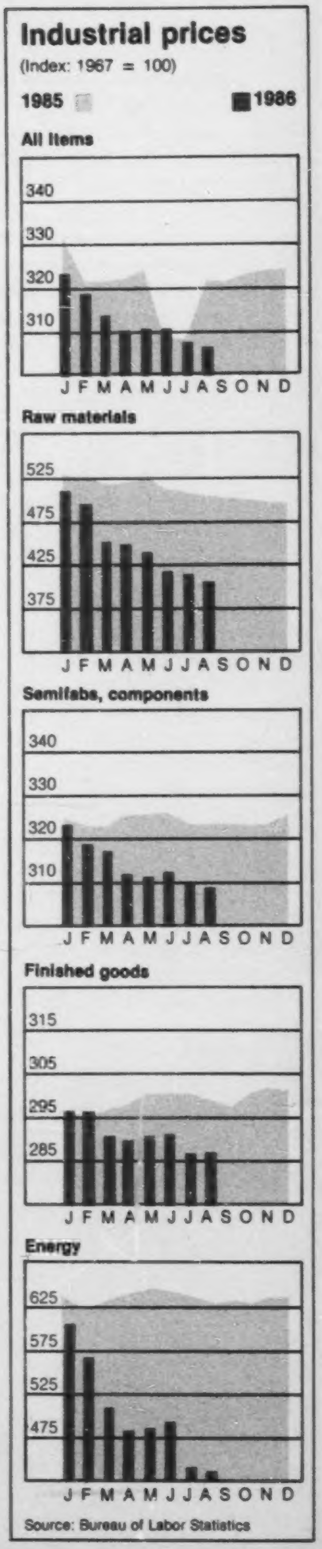
The lingering impact of the decline in energy tags from spring and early summer is continuing to exert a downward pressure on industrial price averages. Last month, for example, this energy weakness helped shave another 0.3% off Uncle Sam's overall industrial producer price index—bringing this bellwether yardstick close to 5% under year-earlier levels.

But that should be it for declines. Current increases in gasoline, heating oil, diesel fuel, and other oil-related products are beginning to influence this aggregate measure of inflation.

There are, however, few signs of any significant increase in most other sectors. Capital goods, for instance, have been increasing at only a 1% annual rate. And even this is tempered by declines in light motor trucks and oil field equipment.

Textiles are actually weakening, principally because of the 50% reduction in raw cotton prices (reflecting lower government support levels). This, in turn, is putting downward pressure on both synthetic fibers and some fabric lines.

The chemical sector also remains virtually depressed. True, the latest reported declines in both industrial chemicals and plastic resins are unlikely to be repeated, but buyers report considerable resis-


Industrial prices

(Index: 1967 = 100)

Source: Bureau of Labor Statistics

tance to new price-boosting moves.

The picture is much the same for nonferrous metals. While lead and zinc have been fairly buoyant lately, this is more than offset by easiness in both aluminum and copper. And some of the speculative steam has gone out of the precious metals sector, with platinum off substantially from early September highs.

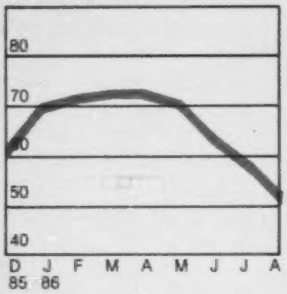
Steel also looks far from strong. The recent small hikes will probably wash out as soon as current labor problems are resolved.

Construction materials are also holding steady. The leveling off in housing—albeit at high levels—suggests little upward pressure on lumber and most other materials. In fact, cement has actually been edging lower.

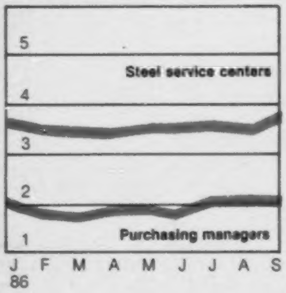
About the only notable upswing has been in paperboard—as producers try to push linerboard up close to $320/ton. This, in turn, is nudging corrugated carton tags up. But there is plenty of buyer resistance so increases here, too, should be moderate.

Steel

Operating rates

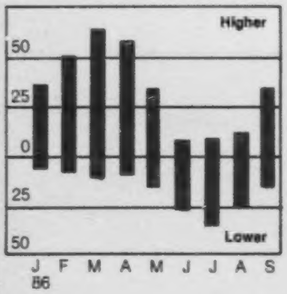


Inventories
(Months supply on hand)

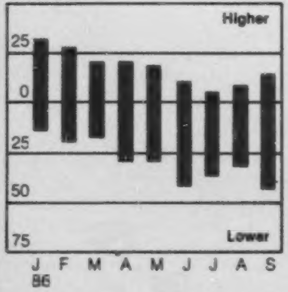


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 14%
SAME 43%
SLIGHTLY BELOW 43%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 0%
SAME 72%
5-10% BELOW 28%
10-20% BELOW 0%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

Fall gains won't offset fall for the year

A seasonal pickup in steel this fall won't be good enough to prevent overall declines for 1986, both in shipments and consumption.

There is some bullishness in the industry, but it isn't widespread. Steel distributors are the most optimistic. In a recent survey by the Steel Service Center Institute (SSCI), 35% of the respondents said they anticipate increased business over the next three months—well over the 15% who see declines.

But PMs are more bearish. Only 14% of steel buyers surveyed by N.A.P.M. expect to beef up their purchases. While that's an improvement over the 8% positive responses of the previous couple of months, it's still way under the 20% and 30% readings noted in the first few months of the year.

There isn't really much of a case for a big fourth quarter for steel. And without such a pickup, overall 1986 shipments are likely to be disappointing. Right now, mills are talking about a 70 million-ton-year—off three million tons from 1985.

The consumption picture is much the same. The Commerce Department puts 1986 domestic chew-up at just above 89 million tons—three million tons under the total projected three months ago.

But consumption isn't the only factor behind the poor showing. Tight inventory policies are also playing a role. This is even true of service centers. SSCI president Andrew Sharkey notes that "members continue to report intensified efforts to hold or reduce current inventories during the coming months." Sixty-five percent of those polled indicate that stock levels are too high compared to shipments.

Buyers are saying about the same thing. Some 44% consider inventories too high relative to demand in contrast to only 4% who feel they're too low.

And 53% of these buyers say they will try to reduce inventories over the next six months. Only 4% say they contemplate some accumulation of steel.

What makes this so surprising is that the retrenchment is taking place at a time when there normally might be concern about supplies because of recent scattered strikes that have hit some mills.

But these strikes have apparently not sparked any worry about availabilities. Four out of five buyers surveyed see no problems anywhere. And the remaining few limit their concern to coated sheet, electrical sheet, and structurals.

Why the lack of concern? The surveys suggest two reasons: 1) expectations that business isn't going to set any records over the next few months and 2) the continuing availability of imports.

The import reliance is also being fed by continuing bargains, despite quotas and a weakening U.S. dollar. Some 43% of queried steel buyers say imports are selling under comparable domestic product—8 points more than those who noted a price advantage a month ago.

Steel service centers also report a jump in overseas bargains, but only in stainless steel. Latest reports here indicate that more than one out of five (21%) now get significant 11-20% differentials on stainless.

Service centers are also optimistic about overall prices—domestic as well as imports—over the next six months. Latest findings: 70% see no changes and the remaining 30% are equally divided between those expecting increases and those expecting declines. This suggests that steel price averages will remain pretty much unchanged into early 1987.

PROCUREMENT STATUS

No queue in view

The normal early-fall delivery stretchout—reflecting seasonal demand recovery—has failed to materialize so far this year.

The situation is essentially status quo. *PW*'s exclusive leadtime index continues to rest squarely in the neutral 50 zone. And N.A.P.M.'s speed of delivery yardstick shows very little change, with the small number (6%) of items showing slowdowns offset by the same number showing speedups.

Several factors are cited by PMs for this continuing easiness. Top among them is the current lackluster industrial production pattern—though this could improve a bit in this quarter as the number of respondents reporting improved orders (28%) topped those noting a worsening by almost a 2:1 margin.

Other reasons for the continuing "no sweat" situation include low factory utilization rates (only near 78% for the typical facility), the still-strong import flow (totals are actually rising), and better monitoring of incoming shipments—reflecting more computerization and improved expediting on the part of purchasing.

And as might be expected, there is little pressure for forward ordering or inventory accumulation. Some three out of five buyers are ordering production materials 30 days or less in advance. And inventory parers outnumber accumulators 24% to 18%.

Current price trends are also indicative of the relatively easy purchasing climate—as once again those reporting price declines (10%) outnumber those reporting increases (9%).

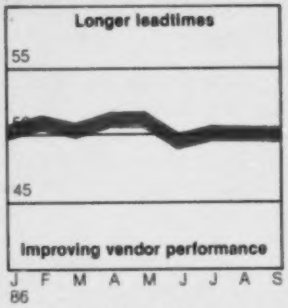
Where do we go from here? Buyer consensus is that ready availability will carry through the next few months. As one PM puts it: "There could be some inching ahead in leads toward the end of the year if forecasts for a modest business pickup materialize."

But he and others are quick to add that any increase in leadtimes will be very manageable and would be a small price to pay for another few months of continuing economic upturn.

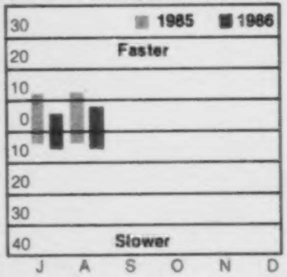
Monthly procurement status report

Leadtime index

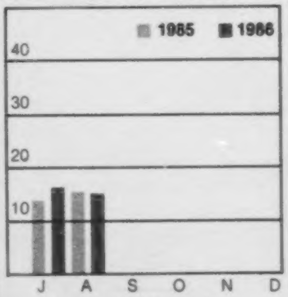
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



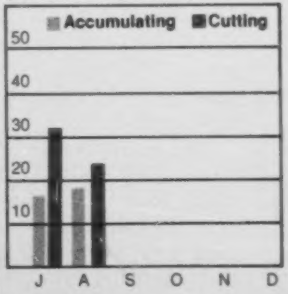
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Some steel items are taking 1-2 weeks longer—with these new weekly leads: H-R sheets (6-7), wide coated sheets (7-8), heavy plates (3-4), and light plates (3-4). Softwood plywood is also out a week (to 3). But surfactants are in (to 2). No change in aluminum sheet or stock brass (1).

Cleveland: A modest shrinkage is noted in coil coating paint (to 2 weeks) and polyvinyl chloride resin (1-2). Other prevailing weekly leads: glassines and greaseproof papers (4-5), hardwood lumber (1-2), skids (1-3), plastic packaging materials (4-5), corrugated folding boxes (2-3), and cold finish aluminum (8).

Los Angeles: Brass castings have moved out 2 weeks (to 8-10). But grey iron castings are holding (at 6-8). Other current leads: galvanized sheet (12-14), aluminum tubing (4-6), stainless coil (12-14), aluminum sheets (12-14), standard fasteners (2), standard bearings (20-24), and standard valves (10-12).

Houston: High-density polyethylene has edged out a bit to 4.5 weeks—with price hikes looming. Other typical waits: polypropylene

(4.5), corrugated containers (3.5), galvanized steel coils (16), steel fasteners (2), plastic bottles (6), 4-color process printing (6), and steel pipe (4-12).

Philadelphia: Special polishing wheels have come in 2 weeks (to 12). But there has been little change in other MRO items such as standard drills (2-4), standard taps (3-4), standard grinding wheels (4-6), standard polishing wheels (3-4), cutting oils and lubes (4-6),and paper toweling (1). Steel leads are also holding.

Pittsburgh: Another month of little change. Average waiting times: multi-wall bags (6), plastic bags (3-4), corrugated and folding boxes (3-4), waterproof paper (8), lumber (3-4), seals (1-2), polyethylene and polyvinyl chloride (5-6), lead (2), zinc (3), metal hardeners (2), and coil coating paint (4).

Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	7½	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	3½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	4	4
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	6½	6½	6
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	7	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14½	14½	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	9	9	11
Motors (Phil)	9	9	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	1½
Plywood (Chgo)	3	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2	2	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1

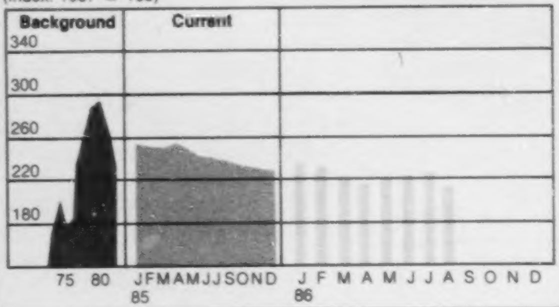
	Now	Month ago	Six month ago
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	9	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	11	13
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	11	11	12
Brass Castings (LA)	9	7	5
Brass Rods (Chgo)	9	9	6½
Brass Sheet (Chgo)	5	5	4
Brass Tube (Chgo)	4	4	7
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	3	3	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	7	5
Fasteners, Std. (Phil)	2½	2½	1½
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

(Index: 1967 = 100)

Latest month	**211.8**
Month before	**227.6**
Year ago	**239.8**



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt.	31.00	31.00	29.25
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	25.90	25.90	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.550	.543	.475
Antimony, N.Y., dealer, lb.	1.07	1.06	1.33
Beryllium-copper, cost ingot, lb.	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb.	1.28	1.27	1.29
Brass, yellow, [sheet], lb.	1.23	1.22	1.24
Cadmium, N.Y., dealer, lb.	1.00	1.04	0.80
Copper, electrolytic, wire bars, refd., lb.	.64	.63	.66
Copper sheet, over 24 in., lb.	1.37	1.36	1.38
Lead, common, N.Y., lb.	.23	.22	.19
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	182.00	190.00	318.00
Molybdenum, oxide, dealer, lb.	3.00	3.00	3.15
Nickel, cathode, dealer, lb.	1.82	1.86	2.30
Platinum, dealer, oz.	581.00	541.00	318.00
Silver, N.Y., oz.	5.70	5.39	6.30
Tin, N.Y., dealer, lb.	2.57	2.55	5.80
Zinc, Prime West, East St. Louis, lb.	.440	.440	.410
Zinc, die casting alloy, No. 3, lb.	.475	.475	.485
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.34	16.46	16.22
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	580.00	580.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	320.00	310.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.222	.229	.258
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	.94	.94	1.04
Cotton middling, 1", N.Y., lb.	.330	.265	.566
Printcloth, 48", 80x80, N.Y., spot. yd.	.74	.70	.62
Army duck, 37", 13 oz., yd.	1.45	1.45	1.70
Blended printcloth, 64", 78x54, yd.	.750	.740	.680
20s combed yarns	1.74	1.70	1.95
Wool 64s, Staple, lb.	1.90	1.90	2.03

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.455
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	80.00	N.A.
Benzene, petroleum, tanks, Houston, gal.	.80	.68	.93
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.52	.52	.52
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.255	.255	.280
Polypropylene, homopolymer grade (market price), lb.	.320	.330	.350
Polystyrene, general purpose grade (market price), lb.	.330	.330	.360
Polyvinyl chloride, pipe grade (market price), lb.	.285	.300	.250
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.21	.21	.30
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.73	.73	.69
Xylene tanks, gal.	.80	.80	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	324.85	317.70	322.35
Lumber 2x2 pine, mbf, cl	313.00	311.75	289.85
Plywood, plyform, ¾", msf, cl	591.25	592.05	583.10
Plywood, ⅝", msf, cl	385.55	385.20	382.45
Cement, bulk, ton, tl	63.35	64.43	64.91
Sand, ton, cl	6.62	6.62	6.35
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.83	48.01	47.99
Crushed stone, 1½", ton, cl	7.78	7.80	7.80
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.83	0.82	0.81
Gypsum sheathing, ½"x1"x8", msf, tl	217.57	217.57	207.94
Brick, common, per thousand, tl	185.81	185.81	183.70
Asphalt paving, AC-20	144.97	145.53	176.97
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.21	7.23	7.13
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	11.00	8.00	22.25
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	14.75	13.50	19.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.470	.405	.785
Gasoline, 94 oct., reg., Chi., tank car, gal.	.470	.460	.774
Heating oil, No. 2, Chi., bulk, gal.	.450	.445	.768
Heating oil, No. 2, N.Y., bulk, gal.	.463	.430	.770
Heavy fuel, FS 400, Los Angeles, rack, bbl	26.50	26.50	26.50
Jet kerosene, gal.	.410	.400	.803
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.245	.320
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	76.00	76.00	75.00
Steel, No. 1 hvy., dlvd., Chi., ton	72.00	76.00	71.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.560	.540	.550
Copper, No. 2, East, wholesale buy, dlvd., lb.	480	.460	.470
Brass, red, East, wholesale buy, dlvd., lb.	.520	.500	.510
Brass, yellow, East, wholesale buy, dlvd., lb.	310	.310	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.335	.325	.295
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.355	.345	.325
Zinc, old, East, wholesale buy, dlvd., lb.	.17	.17	.11
Lead, clean solids, East, wholesale buy, dlvd., lb.	.130	.120	.110
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	18.00	8.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.09	.09	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.11	.11	.19

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Good news for buyers of fax, ETs, copiers, and PCs

If you can manage to make sense of the confusion in today's office equipment industry, it is definitely a buyer's market. Prices for most types of office equipment are soft or are actually declining on a combination of the falling dollar, more-than-ample dealer/distributor stocks, and technological advances.

The office equipment market is ripe for purchasing involvement and direction—from coordinating the purchase to vendor selection and contract negotiation.

The trick to buying office equipment in today's rough-and-tumble market is to do a thorough job of researching the match between your company's needs and the features on a given piece of equipment. Many manufacturers are attempting to cloud the price issue by adding all sorts of fancy "high-tech" features to a copier or an electronic typewriter—features that you may not need and certainly shouldn't pay for. One copier industry insider explains the problem succinctly, "Technological development is way out in front of market development. That means that manufacturers must convince customers that they want and need all of the goodies they can now offer." That statement should send a signal to savvy office equipment buyers: Price is only one aspect of a good equipment buy today.

A new nationwide ***Purchasing-World*** survey finds that for every PM experiencing an overall price increase in this area during the current year, there was someone else who managed to eke out a reduction. And that trend is likely to continue. Growth projections from the Computer and Business Equipment Manufacturer's Association (CBEMA) for various types of office equipment (facsimile machines, copiers, and electronic typewriters) call for very small increases or even slight declines in dollar sales through 1995. At the same time, growth is expected in the number of units sold (see accompanying charts).

Price crunch

Why so much price pressure on office equipment these days? The answer is four-pronged: 1) substantial efficiency gains, 2) overcapacity, 3) too many suppliers, and 4) price-cutting by overseas suppliers. The latter is amply demonstrated in the PC sector where cheap IBM clones have flooded the market, forcing sharp declines in overall quotes (see the story on page 58 for more details).

Another factor that is keeping office equipment manufacturers off balance is less-than-sensational demand. While buying is up slightly, office gear prices just haven't reached the levels projected by some of the more optimistic producers earlier this year.

The big question, of course, is what happens in the next several years. Is it realistic to expect further price declines? Will demand show any pickup in the quarters ahead? Here's what respondents to *PW*'s survey have to say:

- **1987 overall price trends:** Some increase does seem likely—65% of the survey respondents see increases while only 14% count on continuing declines (21% see no change). But the increases are only expected to be in the 0-5% range.
- **1987 specific price changes:** Survey respondents say that prices will drop for PCs, PC software, printers and other peripherals, and electronic typewriters. The general feeling is that there will be slight increases in copiers, telecommunications equipment, office furniture, and office supplies.
- **1987 overall volume:** The picture here is basically bullish. While no big boom is anticipated, survey respondents feel that next year's de-

Office Copiers

"Prices will drop while units will increase"

Annual Rate of Growth
1985-1995

Units	12%
Dollars	3%

Source: CBEMA

mand picture will be better than this year's level. Forty percent of surveyed buyers expect to increase their purchases of office equipment and supplies next year. That compares to only 28% who will be buying less and 31% who will buy about the same.

Purchasing's in the thick of it

Despite the headaches this market presents, buyers are not walking away from the challenge. In a special ***PW*** survey question asking about the purchasing department's role in the office equipment buying decision, almost 20% of respondents say they are the primary decision makers. Almost all of the rest of the respondents (71%) say that they are an integral part of a team buying effort. Significantly, only 11% say they are simple order takers.

Buyers involved in office equipment are taking steps to get top mileage out of their efforts. Much of their emphasis is on price—with better quotes being sought through hard-nosed negotiations and increased use of volume purchases and blanket ordering.

Buyers also report that overseas bargains—though they certainly do exist—are becoming more difficult to find. The appreciation of the yen has hurt Japanese bargains but buyers are finding new sources of supply in such places as South Korea.

A savvy buying strategy addressing today's peculiar market climate in office equipment and supplies would have to include:

1) keeping up with fast-changing technology
2) sorting out a salesman's pitch from actual fact—especially on "high-tech" features
3) careful evaluation of your exact needs so that you don't end up paying for fancy features you don't need
4) keeping an eye on standardizing equipment in your office—even in this volatile market
5) deciding on whether to buy or lease
6) considering equipment that can be updated as an alternative for replacement
7) evaluating the chances of fast obsolescence
8) negotiating solid, comprehensive service contracts
9) checking vendor references
10) consulting with experts when necessary.

On the following pages, ***Purchasing World*** has compiled the most up-to-date information about the major copier, electronic typewriter, and facsimile vendors. Resource tables and news on the latest product developments in these categories will help you make solid purchasing decisions for your future office equipment buying. Use the reader service card for company and product information. ***PW***

Facsimile Equipment

"Prices and sales should stay on an even keel"

Annual Rate of Growth
1985-1995

Units	10%
Dollars	11%

Source: CBEMA

Electronic Typewriters

"Demand creeps up, dollars fall as text, processing stations gain popularity"

Typewriters

Annual Rate of Growth
1985-1995

Units	3%
Dollars	12%

Text Processing Workstations

Annual Rate of Growth
1985-1995

Units	15%
Dollars	11%

Source: CBEMA

Where to go for guidance: office resources

To make an informed office equipment purchase, buyers must have accurate and thorough information—a tall order in an industry as volatile as the office equipment market. Here are some resources that may help you:

- *The Office Purchasing Guide: How to save up to 50% on office supplies & furniture, business forms & printing, and office machines and equipment* by Tod J. Snodgrass. This book gives tips and detailed information on how to save money buying office equipment and supplies. Includes examples of various business forms. **Circle 34**
- *Official Facsimile Users' Directory*. This 465-page guide lists the facsimile number and other company information for thousands of facsimile machines across the country. The book also provides basic information on national and international facsimile standards. **Circle 35**
- *1986 Report on the NOMDA Show* by Camarro Research. This comprehensive report gives details on price, performance, and marketing strategy for the electronic typewriter industry with a company-by-company, model-by-model breakdown. **Circle 41**
- *What to Buy For Business*. Subscribers to this consumer report designed specifically for business buyers, will receive in-depth monthly reports (including candid appraisals and product ratings) for typewriters, computers, postage meters, telephone systems, software, business travel, printers, and other office products and services. **Circle 46**
- *North American Copier and Copyboard Guide* by Infomarket Inc. This 480-page book gives company-by-company rundowns on copier products and copyboards. Technical specifications, features, and operator tasks are detailed for each model. **Circle 52**

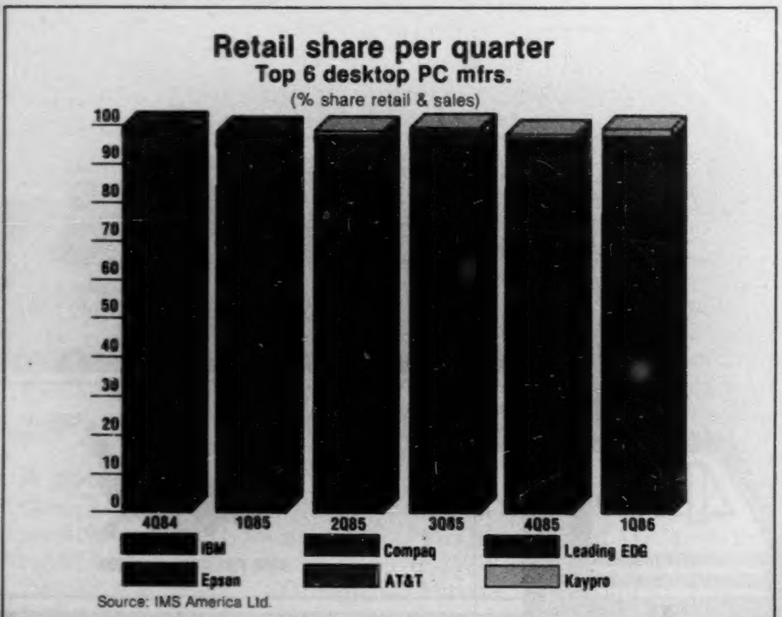
Send in the clones

The computer market scene is almost like a war movie. Big Blue is battling the Clones. Everybody in the business is fighting to have the most powerful machine, with the newest technology. And there's the bloodletting from cutthroat prices. It's a great show, with an all-star cast. Every buyer has to love it, confusing as it might be.

Take a look at the price front: PCs have been dropping at the rate of 20% a year since the introduction of the first models a few years back. This year, prices could drop as much as 25-30%, as both overseas and U.S. competitors step up the pressure on benchmark IBM models.

Here are some recent developments in the fast-changing PC war:

- Some of the large retail chains are selling Asian-built IBM clones under their own brand names. Even without this development, the leading compatibles are clawing away at IBM's dominance. The giant's share of market in PCs is now down to 75% from a high of 95% in the third quarter of last year. The top-sellers—Compaq, Epson, and Leading Edge—captured better than 20% of retail sales in the first quarter of 1986. Greater fragmentation of market share can be expected as the number of clones proliferate. Adding to the continuing competitive pressure is the ease of cloning. It's now virtually impossible to hide anything in silicon chips anymore. Once a chip is sold in a system, it can be opened up, photographed, analyzed, and recreated without violating copyrights. It is expected that 3.6 million clones will be sold worldwide in 1986 alone.
- IBM's new 286 XT is priced about 25% under comparable versions of its previously more powerful PC-AT. And, if industry rumors prove correct, the company will be coming out with a new low-priced consumer-oriented IBM machine.
- One important development is the increasing popularity and proliferation of laptop models. These portable, full-function machines can be had now for less than $2,000—a quarter of what they went for a few years ago.
- Machines with Intel's much heralded 80386 microprocessor are gradually being introduced into the marketplace. The chip runs four times faster than current PC microprocessors. And, because it has a lot more memory capacity, it will allow the use of some powerful programs that are now usable only on large minicomputers or mainframes.


Retail share per quarter
Top 6 desktop PC mfrs.
(% share retail & sales)

Source: IMS America Ltd.

Slower than expected

What is making the competitive infighting even rougher is the slowdown in the growth of demand for PCs. Unit gains of 133% and 134% were posted in 1983 and 1984, according to Dataquest, an industry research outfit. With gains like these when PCs were first catching on, some deceleration was to be expected.

But no one anticipated last year's 2% decline, or an only 8% advance for this year, when 12-15% was projected at the beginning of the year. Mix this with the price declines and it paints a woeful picture for computer makers.

What will most likely happen is that the industry will undergo another wrenching shakeout of the dozens of newcomers lured into the market over the past year or so by plunging costs and IBM's tardy product improvements.

Some cheer here

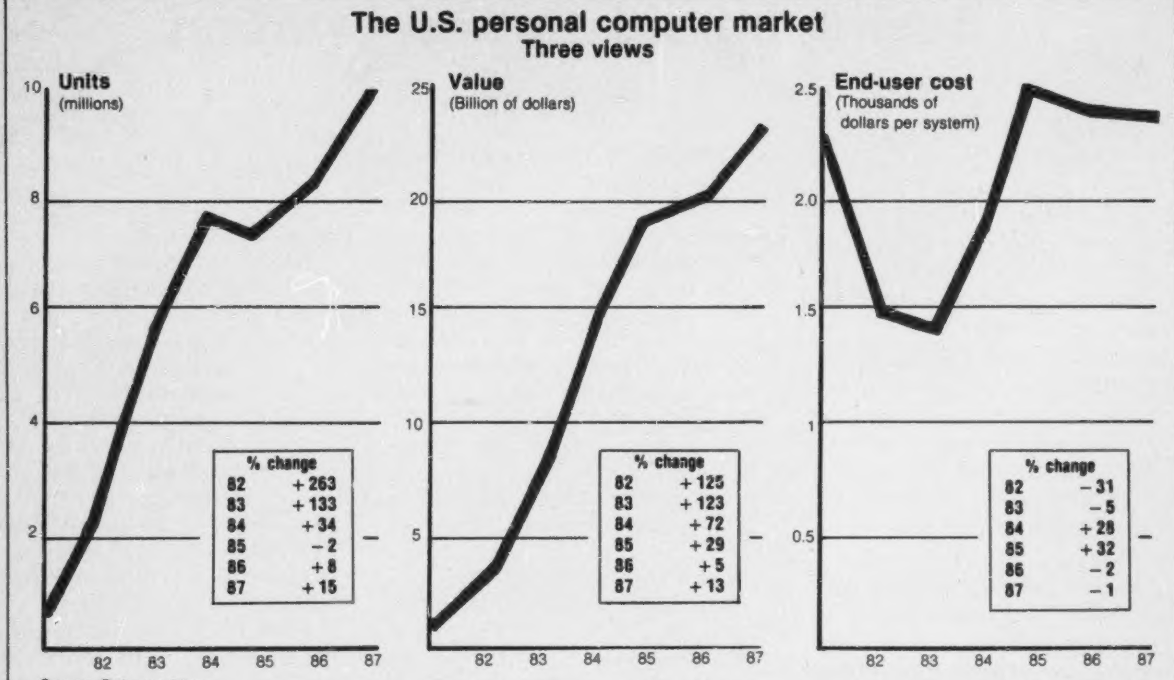
On a positive note, some manufacturers have been able to parry the price blows, at least partially, by enticing buyers to go for upgraded, more expensive models. This is evident in Dataquest's estimates of the average outlays per unit. These expenditures, despite the widely ballyhooed price cutting, have been relatively stable this year, falling off only 2% from 1985.

Another cheery sign for manufacturers is the acceptance by business of portable computers. The sharp reductions mentioned earlier have convinced many firms to take the laptop seriously. Some analysts, for example, see sales more than doubling in this area in the current year and doubling again in 1987.

Welcome the 386

Among the features sparking the increase in laptop sales are special features and greater availability of software.

Buyers are also keeping their eyes on upcoming "third generation" PCs—those using the new 80386 microprocessor. While only a few models using the new chip have hit the market, it is expected that a



Source: Dataquest Inc.

flood of these more efficient machines will be out before too long. Intel, the developer of the new chip, estimates that more than 150 desktop computers are being designed around the new 386.

Speed is the big selling point. According to Intel's benchmark tests, the 386 can process about four million instructions per second (4 mips), handling 32 bits of data at once. By contrast, the older 80286 chip that powers the IBM PC-AT works with 16 bits of data and is rated at only 1.5-2 mips.

Aside from speed, the 386 has vastly increased memory potential and it makes multitasking (the ability to do several jobs at the same time) possible. Once software is available, users will be able to switch back and forth between major programs at the touch of a button because the 386, unlike other 32-bit chips, keeps different software applications from interfering with one another.

But these new generation machines will carry a premium. Tags will range upwards of $8,000. On the other hand, this relatively high price may well be worth it to users who want to be able to run elaborate simulations as well as sophisticated engineering and scientific programs that previously required high-priced mainframes.

Despite these advantages, sales for these more powerful units may face slow going at first—at least until the price comes down. Right now, it is too high for the mass market. Another temporary roadblock is that the 386-designed software, which will be necessary for full realization of the machines' potential, won't be ready for another year.

PC prices dip

The overall average dealer price of a personal computer fell by $170—from $1,574 to $1,404—between the last quarter of 1984 and the first quarter of 1986. Top ten producer prices fell by approximately the same amount—from $1,588 to $1,443. Excluding IBM, the top nine producers showed the greatest average price decline, with a drop of over $200—from $1,620 to $1,417. Here's a breakdown of the six-quarter average dealer price for the top ten and for all others:

IBM	$1,742
Compaq	2,343
Leading Edge	1,192
Epson	982
AT&T	1,505
Kaypro	1,179
NCR	2,304
Sanyo	485
Zenith	1,486
ITT	1,207
All others	822

Source: IMS America Ltd.

Long-term outlook

Most industry analysts say that the future is basically bullish, with about 15% annual gains likely through 1990. By that time, some 13 million PCs could be clearing the market—up 60% from the 8 million units expected to be sold this year.

The gains in PC sales are not to be limited to business applications. About 14% of U.S. homes now own a computer and that is expected to rise to near 25% by the end of the decade.

But the tough competition and rapidly emerging technological breakthroughs will continue to keep the industry off balance. On the competition front, for example, look for Japan and Korea to continue to seek further inroads into the lucrative American market.

In short, the buyers market is here to stay. ***PW***

DRI forecast

Ho hum price pressures

Don't worry about industrial price inflation heating up significantly over the next two years. But on the other hand, don't expect a repeat of the negligible advances of the past 12 months.

That's the gist of the latest Data Resource Inc. (DRI) quarterly rundown of key product price trends for 1987 and 1988. Credit the continuing restraint, say DRI analysts, to a combination of slow economic growth and relatively low overall inflationary pressures.

The lack of any underlying price push, aside from slow growth, is attributed to modest wage boosts (average earnings for private nonfarm production workers will rise from just 2.7% this year to only 3.3% in 1987 and 4.1% in 1988) and lingering softness in the energy sector (with oil actually expected to weaken again by next spring).

Here's a more detailed rundown of what analysts at the Lexington, MA-based econometric consulting firm see ahead for some key product lines:

- **Refined petroleum products:** Processed fuels and lubricants, reflecting the above oil price scenario, will drop another 3.6% over the next 12 months (on top of this year's estimated 18.8% plunge) before rising a modest 5.4% in the 12-month period ending fourth quarter 1988. Individual products like gasoline will follow this pattern rather closely.
- **Chemicals:** Energy weakness will have its impact here, too—though overcapacity will also play a role in keeping a lid on tags. Industrial chemical price averages, which fell 5.4% over the past 12 months, are expected to rise by only 1% through late 1987—and only a slight acceleration to 3.1% anticipated for 1988.
- **Metals:** Tags should move up modestly in 1987 and 1988—as continuing rationalization brings supplies more in line with demand, and cost pressures start to rise. Steel mill product averages, which fell 4.4% over the past year should advance 3.5% over the next 12 months and 4.7% over the ensuing four quarters. And primary nonprecious, nonferrous metals will follow this year's 2.1% average drop with increases of 4.8% in 1987 and 3.2% in 1988.
- **Machinery:** General factory overcapacity and uncertainty over the new tax law will put a damper on both demand and price increases. But negligible cost escalation will ease the pinch on profits. Overall, aggregate machinery and equipment prices will average a modest 2.9% annual rate of increase between 1986 and 1988.
- **Oil country goods:** Oil price weakness will have a depressing effect. Prices will remain essentially flat over the near term. More manufacturers will be shutting down operations—many of them permanently.
- **Electronic components:** Declining book-to-bill ratios suggest that industry recovery has stalled at least temporarily. But some recovery is expected next year. Escalation rates at that time, reflecting this stronger demand, will rise 2.8%. And a rather strong 4.9% is seen for 1988.
- **Construction materials:** Price escalation will remain moderate because of the projected declines in nonresidential construction as well as gradually weaker levels of home building. Sheet metal products, for example, will show only 1.5% and 2.1% advances in 1987 and 1988. But heating equipment could move up at a somewhat strong 3.8% annual rate over the next few years because of stronger cost pressures.
- **Corrugated containers:** The slow price recovery that recently got underway will continue. By late next year prices could be up another 2.9%—with an even larger 4.1% gain projected for the subsequent 12-month period.
- **Autos:** Fairly good demand and rising import tags will permit some modest advances. DRI forecasts average annual increases of 4.2% from now through the end of 1988.
- **Appliances:** Higher costs will place upward pressure on prices by late 1987 and 1988 as energy materials and labor costs begin to rise. All in all, look for a 3.3% annual rate of advance over the forecast period.

PW

Industrial Price Trends Through 1988
(Comparison of 4th quarter pricing)

Product	% change 86/85	87/86	88/87
Raw materials, energy			
Residual fuels	−37.1	1.2	8.8
Industrial chemicals	−5.4	1.0	3.1
Processed fuels & lubricants	−18.8	−3.6	5.4
Intermediate materials, ex. food	−2.0	1.5	3.7
Metals			
Steel mill products	−4.4	3.5	4.7
Galvanized sheet & strip	−5.2	5.2	4.8
Stainless plates	−1.0	4.1	4.0
Primary aluminum	3.5	4.6	2.5
Lead, pig	8.6	2.8	4.7
Zinc, die-cast alloy No. 3	2.2	3.4	0.5
Magnesium, pig	3.9	3.9	4.8
Aluminum shapes	−0.1	5.7	2.6
Components			
Plastic construction prod.	−2.2	0.1	0.8
Laminated plastic sheets	0.2	1.9	3.6
Corrugated containers	1.6	2.9	4.1
Foundry & forge shop prod.	1.7	4.0	3.7
Motors & generators	1.2	6.2	6.1
Electronic components	1.9	3.6	5.8
Refractories	0.8	2.7	2.8
Tires	1.5	1.5	4.6
Machinery			
Construction eqpt.	2.2	4.1	4.8
General purpose mchy.	1.7	3.1	4.1
Special industry mchy.	3.1	4.0	5.5
Electrical mchy. & eqpt.	1.9	4.4	5.0
Mining mchy. & eqpt.	−0.1	3.1	0.9
Trucks (over 10,000 lb.)	4.8	5.0	5.3

Source: Data Resources, Inc. Cost Forecasting Services

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